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Parsing the Interface: Videogames and the Posthuman

by

Joseph Ferenbok

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the

requirements for the degree of Master of Arts

in

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Abstract

This Thesis dispels any residual notion that videogames are not worthy of critical attention by looking at games as Ideological Apparatuses of hegemony and ideological control. Using Foucault's panoptic metaphor as a mechanism for the analysis of videogames as posthuman interfaces, this thesis examines the complexities of the emerging communication media. The language at the seam of this interaction is a posthuman dialogue that is being improved daily. From computer systems that respond to eye movements to simulators that respond to a pilot's thoughts, technology is being developed that aims to seamlessly integrate humans with machines. Every time the Gamer takes up a controller, every time mouse clicks 'send', a dialogue occurs between the human and the machine: rules are set, and worlds are created, disciplines are internalized, and new embodied experiences are generated. Videogames present scholars with a kind possible virtual future, a future that allows academics to peer at the forefront of the interface: between the human as we remember it and the images of the posthuman that we are constructing.

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Introduction: Why Videogames?

On the horizon was the silhouette of buildings against the blue sky; I was behind the wheel, trying to reconcile my ideas about posthuman ideology and the panoptic interface; the four-year-old I was babysitting was safely stowed in his car seat in the back—doing his best impression of Rodan's "The Thinker". It was a pivotal moment; I just didn't know it yet.

"Where's Spiderman?" The four your old asked suddenly awakening as if from a trance.

"Spiderman?" Spiderman was his current passion, following close on the heels of Dinosaur mania; he could not get enough Spiderman. It started with action figures, t-shirts, socks, pyjamas, but had recently developed into an obsession with the Spiderman videogame. At first he would pick up the controller and demand the game to be loaded by someone else, but he soon learned how to locate the executable file himself. He held the controller on his lap for support because it was too big for his hands. 'Outside,' was his favourite level (also the first level); it was a generic cityscape where Spiderman swings from magically anchored webs searching for 'bad guys' and his Uncle Ben's killer. Although the four year old liked to find the bad guys and beat them up,[i] he also enjoyed helping the bystander find her purse (often directing me to 'help find the lady's backpack'), and on more than one occasion I had caught him simply exploring the virtual affordances[ii] of the video vista. Swinging through streets jumping from one rooftop to another; climbing walls, and shooting webs at self-defined targets.

"Where's Spiderman?" he repeated.

I assumed he was talking about the game. "At home. We'll be there soon."

"No." He protested. "The city." He insisted, "Where's Spiderman?"

I looked back in the rear-view mirror. He was pointing to the skyline.

"Where's Spiderman?"

That was when I realized that, at that moment, for that particular four-year-old, the semiotic signifiers of city and buildings in the videogame had become the categorical metaphor for all cities in general. He saw steel and concrete high-rises against a sky of blue, and expected to see Spiderman swinging among the rooftops. At that moment, for that child, the virtual experience of the videogame became the metaphor for understanding and framing the 'real' world. So I began to wonder how many children who had grown up on videogames had incorporated the metaphors and the interfaces of the genre into their understanding of the 'real' world. How many of them had incorporated videogames into their very identities and understanding of the real world?

Since their first commercial successes, videogames have been a vehicle for community and identity construction. When in 1978 Midway, Atari's main United States' rival, introduced Space Invaders, it revolutionized gaming with two very simple concepts: the never-ending game and the high score. *Space Invaders* had one finality: the player's eventual--assured--demise. Unlike its forerunners (including the 1972 hit, Pong), *Space Invaders* did not simply end when a particular task was accomplished or a specific point was reached; Space Invaders kept going. Level after

level, the invaders, with increased speed, kept coming. Failure was a question of 'when,' not 'if'. The second innovation of *Space Invaders* was a natural by-product of the first, but it was this innovation that has proved so pivotal in videogame marketing; *Space Invaders* introduced the High Score. The innovation of the high score changed the focus of gaming in the early stages of videogames into a mode of identity construction and community building. The High Score became an opportunity not only for the Gamer to prove him or herself against the infallibility of the machine, but also to establish him/herself in relation to a community of others with similar interests, goals, and modes of individuation. Though no initials, or other signifiers of identity, were recorded, the technology of the high score became a measure of accomplishment, identity, and belonging; the primordial ooze for identity construction.

In the early 80's marketers began to link identity, specifically male identity, with videogames. The advertisement for Activision's *Chopper Command* by Bob Whitehead appropriates stereotypical symbols of maleness to appeal to its target audience. The advertisement features the upper torso of a young muscular solder. The solider is strong, confident and well groomed with a commanding presence--suggesting that he might be an officer rather than a grease monkey or private. He is stripped of all individualizing features: his dog-tags, though visible, are illegible, and his head is cropped out of the picture. He is a generalized body, a universal symbol of maleness rather than a particular individual. The forceful active positioning of his hands is not accidental. Considering the advertisement appeared in comic books, the

positioning of his hand in the act of tearing open his shirt clearly alludes to Clark Kent ripping off his clothes to reveal his Superman insignia. But instead of the recognizable diamond 'S' suggested by the geometry of the open shirt, the soldier's chest is bulging (in all the right places) with the insignia that represents his strength, courage, and bravery: Chopper Command. The product placement makes a rhetorical association between the symbolism of Superman and the traits of the players of Chopper Command.

If there is any doubt about the association to Superman's hyper maleness, the headline fixes the meaning of the image. It shouts, in bold sans serif uppercase lettering, "IF YOU'VE GOT THE GUTS, WE'VE GOT THE GAME." The Headline suggests a circumstance where there is a challenge: to prove identity, a challenge to the reader's bravery that can be addressed by the solution presented in the subheadline: buying the game. And in case there is any further doubt the text copy explicitly juxtaposes the attributes of the Superman insignia onto the game. The text copy specifically outlines the attributes of the videogame: 'high-speed, fas'-firing, long-range and plenty of gut-bustin', dog-fightin' action.' The game implicitly announces itself as fast, long, and virile; specifically, it asks of the target market: "What've you got?" The question is more than an assault on tank conveys, it is an assault on the insecurities of male identity. It poses itself as the authority figure, the army officer, a symbol of power and domination, and suggests that the process of buying the product is the act of defining or reaffirming your 'male guts.'

But the advertisement's most interesting claim is that male identity affirmation can and should be done through technological means. The advertisement alleges that the new measure of maleness is the ability to interface and thereby interact, or play, with the machine. Is it any wonder then, that a child today is actually superimposing his experience in a game like Spiderman as the metaphor for the 'real' world?

Since the 80's this interaction between the human and the machine, clearly seen in the example of videogames, has also had a far-reaching impact on popular culture. In the form of the posthuman, invasions into the biology of the human have become standard fare in popular culture narratives. Whereas the 80's saw a proliferation of aliens--aliens like E.T. or Superman, who dominated the silver screen--the late nineties and the early part of the twenty first century has been the stage for a new phenomenon: the posthuman. Not aliens from distant worlds with special abilities like Superman, but mutants and enhanced humans like the X-men, Spiderman, and the Incredible Hulk have come to the forefront of visual culture. Whereas Superman was from outer space, a product of a different non-human society, the X-men are mutants: humans who have been altered by processes of evolutionary mutation. And where Superman is the icon of good wholesome American values, mutants represent a more ambiguous development, less clearly allied with ideal social and moral norms. Wolverine, who figures prominently in both the X-men movies made to date, is a hybrid of genetic advancement and mechanical augmentation. His 'natural' healing abilities are a definite evolutionary advantage, but his indestructible

metal laced skeleton and retractable claws—retrofits of Frankensteinian science—make him a dangerous opponent. In *X2: X-men United*, the second X-men movie, Wolverine allows a villain to drown when the dam bursts—clearly something completely uncharacteristic of the 1980's Christopher Reeves Superman. And the main antagonist in the movie, Magneto, who had originally been allied with Professor Xavier (played by *Star Trek*'s Jean-Luc Picard), is depicted as a kind of anti-liberal-humanist who is fighting for the survival of posthuman individuals!

Another example can be found in the Terminator franchise. In the original *Terminator* (1984) movie, Arnold Schwarzenegger plays a robot with a human shell. His flesh is nothing more than a mask of convenience, the idea was to portray a robot that could blend in with humanity; but when damaged, an eye is expendable: he is still a machine. His status as machine is coded in the conception of reality as mediated though a technologically augmented display—data is overlaid on his field of vision. In *Terminator 2: Judgment Day* (1991), subtle changes occur to Schwarzenegger's character. Although he is now an obsolete model with a new directive, he is now depicted as more 'human' than machine. No longer are his perceptions juxtaposed with human vision. Nor is he ever shown without his human mask. His humanity and self-sacrifice are seen as traits that dominate his machine self. He is more cyborg than machine: more posthuman than inhuman.

The Borg of *Star Trek* offer another example. *Star Trek* as a cultural icon has been faithful to its romanticized liberal humanist vision. Human beings and unaltered genetically, unenhanced mechanically, have been the protagonists of the Federation

since the beginning. In the original *Star Trek* when Captain Kirk confronts a group of androids made as 'perfect' copies of human originals, the androids do not stand a chance against the charm and true 'humanity' of William Shatner. Kirk uses the machines' own logic against them. Being human was seen as something inherently special; it is his human qualities that allow Kirk to adapt and win. In *Star Trek: the Next Generation*, a colony of genetically manipulated (and technologically inferior) colonists need to be rescued by their 'true' human progenitors. The Borg, the most popular adversaries of *The Next Generation*,[iii] they represent a posthuman collective of the distributed self, are brought to their knees time and time again. In the most current series, *Enterprise*, the Doctor, when asked why anyone would wish to replace a perfectly good limb with a cybernetic prosthesis asks "If your heart was failing, wouldn't you want me to replace it with a synthetic one?" To which, Malcolm answers, "Well, that's different." The difference being that technology used to assist life is somehow different then The Borg's use of technology to augment biological functions. The antipathy towards the Borg way of life champions the values of individuality and freedom, the liberal humanist ideals.

Individually, each of these cultural icons can easily be overlooked, but grouped together they clearly demonstrate a cultural apprehension about the directed evolution of humanity and the co-evolution of technology. The ambiguity and anxiety that surrounds the future relationship between humans and technological progress is not a new phenomenon. Samuel Butler's *Erewhon* (1872), based on earlier articles he had written in response to Darwin's *Origins of Species*, and Capek's

R.U.R. (1924) reveal marked trepidation about the future of humanity in relation to the machine. Both Butler and Capek juxtapose humanity with the machine as opposed to the current cultural trend of altering humanity through science, technology, and the machine.[iv] Only Frankenstein's monster, a localized example of a posthuman distributed body, comes closest to the current anxiety over posthumanism. Frankenstein's monster is literally an assembly of human raw materials in a collective body that realizes life only after the death of its human progenitors. The sheer number of "Frankenstein-monsters" in contemporary narratives like the X-men and The Borg—that is, beings whose origins can be traced back to the 'human' but who have been somehow altered by technology--suggests a cultural trend worthy of study and exploration.[v] So it is not surprising that this posthuman state of the augmented 'human' condition has become the subject of many academic prognosticators. And though many theories are being developed about the posthuman body by such prominent figures as Katherine Hayles and Francis Fukuyama, few academics have paid much attention to the posthuman self as a collection of localized distributed subjects. Even less attention has been devoted to examining how a posthuman interface allows a collection of multiply distributed selves to emerge as a whole greater than the sum of their parts. One challenge facing this sort of exploration has been the need to establish a theoretical discussion of the posthuman interface in a contemporary, though embryonic, model.

The challenge of finding a vehicle for studying the posthuman interface was solved by a pensive four-year-old in the back of my car. Videogames are the point of

interaction between the human and the machine; they facilitate the integration of multiply distributed selves and function as a metatext for posthumanism.

Intent

Videogames are cultural artefacts that do not easily lend themselves to serious study. Partly because of their relatively brief history, and their association with adolescence—though the demographics suggest otherwise—and partly because they require specific skill sets for in-depth study, videogames have not yet generated a substantial body of academic criticism. King and Krzywinska, in the collection of essays, *ScreenPlay: cinema/videogames/interfaces*, begin the introduction saying that "The principal focus of most of the contributors to this volume is on games-in-the-light-of-cinema" (King & Krzywinska, 2). But the scope of videogame studies extends beyond cinema, and illuminates entire microcosms of human-computer interaction; videogames are a model of the posthuman interface of the future.

I shall dispel any residual notion that videogames are not worthy of critical attention by looking at games as Ideological State Apparatuses of hegemony and ideological control. I will use Foucault's panoptic metaphor as a mechanism for the analysis of videogames as posthuman interfaces, and to show the complexities of the emerging communication genre.

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[i] I'm not sure about the long-term psychological impact of letting four-year-olds play violent videogames, but Spiderman is not the most violent game he has been exposed to and I am just the babysitter.

[ii] The term *affordance* was coined by James Gibson to describe a resource or a support that an environment offers a subject capable of perceiving and using it. The concept of affordances has become a mainstream psychologically based approach to interface design. The environment, being the interface, offers the user a landscape of affordances. The goal of user-centered interface design is to allow a user to recognize and access the available resources and supports of the interface.

[iii] Also known as TNG in Trekkie circles.

[iv] Butler also warns that we shouldn't be afraid of machines as they are now, but of their progeny who are evolving at a rate much faster than human beings. A similar premise is used in the Animatrix to explain the history behind the Matrix, but it turns out that the machines only enslaved humanity as a response to Human aggression.

[v] Work has been done in such areas as 'possible worlds' theory and Monster Theory.

Part I: Purveyors of Posthuman Ideology

In the early 1980's Atari ran an advertising campaign employing a series of magazine and comic book ads that worked to establish what John Swales defines as a discourse community[vi]. According to Swales "In a discourse community, the communicative needs of the goals tend to predominate in the development and maintenance of its discoursal characteristics" (Swales, 24). A discourse community is established primarily through a body of proprietary lexicons that have meaning for members of a community and serve to distinguish between novice and expert members of that community. The Atari ads asked simple questions like the one depicted in the Ms. Pac-Man ad found in Appendix II. The headline asks "Which player is eating twice as much?" The image is of two identical iconic representations of different players performing virtually identical acts—in this case two mirrored Ms. Pac-Mans eating two different bonus fruit. Two very relevant concepts emerge from understanding this advertisement. The first, which will be discussed in the following chapter, is that of a suture between representations of *self* and *other*, borrowed directly from cinema criticism—a critical tool that will play an important role in my analysis of videogames as posthuman surfaces. The second is the development and maintenance of a lexical and iconic Gamer-discourse community.

John Swales maintains that groups use language as a kind of social behaviour that develops and extends the group's community and is used to initiate new members (Swales 21). A discourse community can invent or appropriate meaning and icons to establish their own signifiers. The red apple and the orange are iconic-lexicon signifiers

of the fruit they represent. To someone unfamiliar with the lexical coding of the videogame discourse community, the icons do not hold any of the specific meanings they hold for Gamers. But in the Gamer-discourse community the icons also represent a specific assigned value. The fruit also distinguish between members of the Gamer-community. While a novice member may look at the fruit and associate a vague notion of point values and context for each item, an experienced player will be able to tell you that the apple is worth 1000 points and the orange only 500. The question the advertisement is really asking is: how well can you decode the proprietary meanings encoded into this text for members of the community? Those who can respond correctly are rewarded through a reinforcement of their membership status; while those who cannot answer are provided with a solution and a mechanism for joining the community: buy the game.

In order to engage in a discussion of the social behaviour of games as panoptic interfaces, and before diving head first into explorations of the distributed self and computers as the transformative evolution of a new sense, some time needs to be devoted to defining the set of principles and terms to initiate the reader into the discursive community of Videogame Studies.

Chapter 1: Videogames: Purveyors of ideology

One of the first videogames I ever played was on the Apple IIe. It was a text-based interface that guided the player through an interactive narrative, sort of like the 'Choose-Your-Own-Adventure' books, based on Douglas Adams' *A Hitchhikers Guide to the Galaxy*. The game was a birthday present and it came in a green box with book art

complete with black cardboard sunglasses and a button that read 'Don't Panic.'[vii] The game was the forerunner to the *King's Quest*, *Space Quest, Police Quest*, and *Leisure-suit Larry* genre of quest narratives or adventure games. Although entirely text-based, the game allowed the player a landscape of affordances. Not everyone would agree today that text-based computer games like *The Hitchhiker's Guide to the Galaxy* are videogames. What then constitutes a videogame?

There are two criteria present in the medium of the videogame, "its status as 'video' and as 'game'" (Wolf, 14). The *video* in videogame refers to the primary interface of interaction found in the medium: a real-time graphic interface. Ralph Baer, the inventor of the home videogame, suggests that *Spacewar* is the first example of what is today termed as a videogame, because it was a real-time dynamic graphical interaction between player and machine (Wolf xi). Videogames by definition must involve machine mediated dynamic interaction, where in the primary action is rendered graphically. But with divergent technologies immerging, like LCD and LED displays, 3-dimensional monitors and immersive caves, it no longer makes sense to limit the action of the graphic interface to 'video' displays.

The second criterion imposed on the medium by its name is the status of 'game'. Videogames belong to the larger class of human activities termed as "games." The second edition of the OED online defines a game as "A diversion of the nature of a contest, played according to rules, and displaying in the result the superiority either in skill, strength, or good fortune of the winner or winners."[viii] Wolf points out that games share specific criteria: namely rules, conflict, player ability, and valued outcome. All

games have rules according to which players play. The rules define the interactions within the game in order to make the interactions meaningful in the context of the microcosm of the game reality. Although game rules can be viewed as confining, they are also the mechanisms that produce meaningful dialogues within the game system. When people intentionally cheat, they move beyond the structure that defines the original game and change the nature of the interaction/dialogue and conflict.[ix] Conflict within any game depends on the rules of the game. When rules are changed, the nature of a game's conflict also changes. If, for example, a play invokes "God mode" in *American McGee's Alice*, the rules of the game and the very nature of the conflict change. "God mode" also impacts the skills necessary to play the game and changes the value of the out come. Without vulnerability in a game like *Hitman 2: Silent Assassin*, the player's skill and the value of the outcome shift, altering the player's emotional investment in the game.

Conflict, and the narrative devices of a game deployed to establish it, allows players to become emotionally invested in the games they play. The processors running the opponents become more than algorithms and code, they become combatants—a reflection of the players' personae invested into the game play. Gamers are in effect playing against shadows of themselves—fighting a calculator does not seem as glorious. In effect, the narrative tools used to create space and time in a virtual world requires a certain amount of psychological buy-in on the part of the player. The player grants the "bad guys" agency through identity production sutured onto the artificial intelligence of the game engine (the bad guys are reflections, the anima to the player's animus) and

thereby grants the machine a psychology. Sherry Turkle writes that, "Granting a psychology to computers can mean that objects in the category 'machine,' like objects in the categories 'people' and 'pets,' are fitting partners for dialog and relationship." In effect, players of videogames are not simply watching a resulting mathematical code being manipulated before them; they are seeing a meaningful dialog of semiotic signs with which they are actively forming a 'relationship'. So for the purpose of this discussion videogame will refer primarily to console and computer programs (both software and hardware) intended for leisure that presents a user with narrative challenges and successes through a primarily visual (GUI) interactive medium.

How do Videogames Function?

In his book *Video Kids*, Provenzo maintains that videogames function in four specific ways. First, "The goals pursued and achieved [in videogames] have no particular significance prior to the invention of the game" (Provenzo, 32). Essentially, videogames create an artificial economy of resource limitations that create contextualized meanings for players. Secondly, he describes videogames as being 'internally reinforcing'. The rules and goals of videogames train players to perform activities that are "pointless relative to most educational, social, and cultural needs". Provenzo contends that a videogame reinforces its own futility. The pellets in *PacMan* (1980) or the ships destroyed in *Freelancer* (2003) have no specific semiotic meaning or value outside the context of the game itself. The scores and levels achieved are an artifice for an exchange fundamentally amounting to abstracted binary code. From a specific socio-political

utilitarian perspective, Provenzo may be partially right: videogames do not contribute overtly to the over all utility of society. Money however is also an example of abstraction: money does not itself have intrinsic value, but as a metaphor, money forms the underlining ideology form most world societies. Perhaps when currency was composed of precious metals it had intrinsic value; but a paper bill, or the numbers my computer reports I have in my banking account, are not themselves valuable they are ideological artefacts of the political system of the state. Money is only valuable in relation to the context it is placed in. Money represents a standardized measure of potential work, only because that is the value a society assigns it. The dismissive argument that videogames are pointless and a waste of time can also be applied to most forms of entertainment, art, and other modes of self-expression. This value laden criticism is misguided, because the significance is *in* how we choose to waste our time in a society.

Thirdly, Provenzo maintains that a central feature of videogames is that they are "extremely fast and complex". Unlike analogue games like pinball, he maintains that videogames are not mediated by any mechanical rules of real world interaction, so they can be more complex and faster than their non-digital predecessors. Although this point is essentially a building block for his rhetoric against videogame violence, the observation provides an interesting social commentary on the impact of new media on society. [x] Not just videogames, but personal computers, have changed the ways in which people interact in our society; as technology changes, the experience of communication using tools like the computer becomes more and more intangible from its original real world experience.

Technology is increasing the speed and complexity of our everyday interactions. Evidence of this change can be seen through the increasing gap between videogames and their analogue mechanical predecessors/counterparts like pinball games. Videogames can be viewed as a gauge of the evolution of Human-Computer Interaction in society—the further games move away from analogue representation the more advanced is the digital abstraction that they represent.

Finally, Provenzo maintains that "the instructions for most videogames are written into the game programs [so] videogames are literally teaching machines that instruct the player using them in the rules of a game as it is being played" (Provenzo 34). This last characteristic is of particular interest to the discussion here, because without overtly saying so, Provenzo suggests that videogames are panoptic mechanisms. What he does not spend time discussing, and what is the focus of chapter five, is that panoptic mechanisms, in addition to instructing players in the use of internalized rules, also provide performative functions within the context of the rules they teach. They are not simply mind control mechanisms, but are also vehicles for expression.

Videogame Studies

Why are videogames worthy of scholarly attention? For the most part videogames have not been deemed worthy of academic attention partly because of the diminutive lexical value implied by the term 'game,' and partly because the medium does not easily lend itself to scholarly study. Stereotyped as a hobby of socially challenged adolescent boys, videogames carry a social stigma as playthings and time-wasters. A gamer on a bus or at a restaurant will meet with many judgemental stares and

disapproving faces. Individuals playing games in public are seen in an anti-social and unproductive light, similar to some early novel readers. But today, the act of reading, even a Harlequin Romance, is less taboo in public than that of playing a Gameboy. Steven Poole, in his book *Trigger Happy,* writes that while, "In the 1980s, videogames were indeed mainly a children's pursuit" they are now "targeted at the disposable income of adults" (6). He cites that, in the year 2000, 42 percent of computer game players were eighteen and over and that 21 percent of the console players were thirty-six or older. These figures point to a generation of young men who grew up during the first two decades of videogame marketing. Perhaps it is this core audience that provoked Andrew Darley's observation that unlike other forms of New Media, "Games it appears were created within a milieu that was highly uniform in terms of its affiliation and the practical and cultural interests of those affiliates" (Darley 24).

Videogames are *Ideological Apparatuses* (IA) that reflect and reinforce dominant cultural values and attitudes. Their influence is constantly spilling over into other mainstream media. Recently a series of movies, including *Tomb Raider*, *Mortal Combat*, and *Final Fantasy,* have attempted to bring videogames to the cinema, while other movies, like *Run Lola Run*, have adapted the videogame narrative aesthetic by replaying the same 'level' narrative with different outcomes. Videogames have also influenced computer culture by contributing to the development of hardware and interface design. Companies like ATI are constantly pushing the boundaries of technology to better accommodate the needs of videogames. Videogames were the very first publicly accessible computing systems. Through the thousands of home consoles sold in the

seventies, videogames paved the road for a change in the domestic space in western cultures. The paranoid fears about the invasion of technology into private spaces that Orwell writes about in *1984*, were curbed by the social acceptance of 'videogame' machines into the home; after all they were only toys. Videogames made an Orwellian image of a dystopian future more palatable—why fear the thinking machine if it helps us play?

Unfortunately despite the cultural, social, and economic impact of videogames on the information age as a communication medium, videogames are particularly difficult to study. One reason for this that Wolf mentions is that videogames require both the critical skills that traditional text-analysis requires, but also the problem solving and game play skills that are required to engage and understand the medium: a scholar needs to either be or have access to a Gamer. But even then, even if videogames are studied as texts with the eyes of a Gamer, other challenges present themselves. Games take time. Reading a novel may take several days, playing a game can takes weeks; and even at the end of that time, there is no assurance that all the possible non-linear sequences of narrative will be exhausted. With so many varied experiences and without a 'standardized' text from which scholars can work videogame study is similar to monastic scholarship before Gutenberg: individual experiences/readings/copies may vary.

Despite the similarities with other forms of narratives, literary genres, and cinematic spectacles, classifying videogames as 'simply' texts would result in a misunderstanding of the implications of the new genre. Text can be read, but texts can also be 'codified'; videogames resist codification. Even if one player's experience in a

game is recorded and played back to another player it would not be the same text, because the first time the text was created by physical user interaction, whereas the second time it was only read (using different processes within the brain). In the first instance the Gamer is part of a panoptic system where s/he is able to interactively project personae within specified channels of discipline, while the second time becomes a coded text for multiple readings. The switch is from subject to object; from an active participant to a replicable 'standardized' text. Videogames provide a kind of metatext for individual-specific experiences. They are a kind of stage for action: a space for character exploration and projection. Videogames are starting to help encode both individual Gamer's experiences (the expression of self), and impact social consciousness. They represent a shift towards the incorporation of the machine into the human self.

This thesis will argue that videogames cannot be ignored because they represent, through the Gamers emotional connection to the system and the system's immersive nature, an embryonic model of our posthuman future. When a gamer picks up a joystick s/he projects her/his identity onto the system—and is not just pressing random buttons for random colour changes to appear on the screen. The photons the screen is emitting have specific semiotic meanings to the gamer, meanings with which s/he identifies and invests aspects of his or her personality. The two sticks in *Pong* (1972) provide not just the illusion of movement; they are the gamer 'playing' ping pong against either another player or the computer. The player's identification with his/her photon self on the screen reflects an investment on the part of the gamer into the system of interaction. This immersion of self into the action represented by the machine and the resulting investment

of self into the process helps to evoke an emotional connection on the part of the person to the videogame and therefore the machine. It is this investment into the Human Machine Interface that makes videogames not only a model of posthuman interaction, but also a topic worthy of scholarly attention. A cultural phenomenon which encourages interaction on a personal level with technology and invites technology into the mainstream of human activity cannot simply be disregarded as "child's play" thing because of the potential impact and implications it has to the future of human development as posthuman beings.

How do Videogames Function as Texts?

Adventure games and role-playing games (RPG's) can be considered as interactive narratives, but as Poole points out, videogames as a medium are not a homogenous genre. He identifies six general genres of videogames: the platform or exploration game, shoot-'em-ups, beat-'em-ups, God games (real-time strategy games), sports games, RPG's, and puzzle games (including quiz games). Although some of the above genres clearly employ narrative structures, other classes like the sports games and the puzzle games are somewhat more problematic. "Narratives have two levels, description and narration" (Aareseth 95); however many videogames, although they are visually descriptive, do not have a storyline. How many levels of *Donkey Kong* must be played and how many times can the Princess be rescued before the notion that the game is a narrative becomes absurd. Is *PacMan* a tale of over-consumption? Does *Tetris* call into question the poor political organization and reconstruction of post-communist Russia? Applying the term narrative to all videogames is as imprecise as saying that all

television programs are mindless—although the statement may be true of the vast majority, it is not a universal truth of the medium.

But narrative is not the only distinguishing difference between office software applications and videogames. A distinction of purpose can be made. Generally speaking, work-based applications like word processing programs and spreadsheets are productivity software designed with production as the end goal. Videogames, on the other hand, are not generally designed as a 'means of production' in the material concrete sense.[xi] Videogames are the assembly lines of leisure that covertly produce normative behavior and ideological benchmarks of dominant culture.[xii]

There exist different types of videogames. An arcade game is designed with social and economic imperatives that differ from those built in to home console games and computer games. Because adventure games "do not rely on rapid physical reflex… and often require long periods of reflection and information assessment before options are acted upon via the keyboard", consequently "both practical and financial (profit) considerations militate against these kinds of game appearing on arcade machines" (Darley 27). The longer an individual player plays one particular game the less profitable that game is, given a finite measure of time. Console games by contrast, must offer a prolonged experience and are often referred to in hours of game play. Home computer games, arguably another distinct class of videogame, offer the extended possibility for more complex interaction; this category of videogame can also be used to describe online Multi User Domains (MUDs/MOOs).

In this view, games are narratives comprised of a series of interactive challenges for the Gamer. Most Windows applications today can be described as a series of disciplines that present the user with opportunities and challenges that result in epiphanies when they have been mastered. A user of Microsoft's Excel must learn how cells behave in order to dance to the next level of the program (applying auto fills to make a row of the days of the week, for example). Once a user has a cognitive construct of cell behavior s/he can start altering relationships, and add formulas to the cells. New skills, once mastered, alleviate a level of frustration and replace it with a level of personal satisfaction; therefore, office applications can be said to function similarly to videogames.

What separates games from other forms of Human Computer Interaction (HCI)? Every Gamer's experience is individual and unique. The specific combinations of interactions with the machine are nearly statistically unique. The specific conditions including time and environment under which the game is played is unique. Without a shared physical recording of the combinations of interactions, that specific game may never be played again. But on a macro level, the particular plot points in a game can become a shared cultural experience. For example, in Diablo II, even though two players may have fought through mathematically different combinations both must kill the level monster before advancing to the next chapter. Even in Literature, each reader's experience of a text can be characteristically different: one reader may read *Hamlet* one way while another scholar my have a completely different 'reading' because they experience the 'text' differently.

But even a text like *Hamlet* is different based on the media by which it is communicated. A reader of *Hamlet* may read the text many times and never actually realize that a particular line is a joke, until that reader experiences *Hamlet* as a theatrical performance from a stage; while performed on a stage lines like 'the world is a stage' incite heightened significance. The communal experience of Hamlet as a play can change the reader's experience of the codified written text.[xiii] Although the written work and the performance of *Hamlet* can be read as texts, the meaning of 'text' becomes a broad concept which includes any semiotic-encoded work. By this definition a videogame is a text, but applying strictly literary textual analysis to games is an injustice. Games are not Literary texts, nor are they Performed texts; videogames belong to a new category of interactive texts that Espen Aarseth calls "ergodic literature". Derived from the Greek words from 'work' and 'path', ergodic literature forces the reader to 'effectuate a semiotic sequence'; the process of selecting this semiotic sequence from a landscape of affordances constitutes the 'selective movement' of physical work in the construction of the text. Ergodic literature differs from narrative literature mainly in that it "implies a situation in which a chain of events (a path, a sequence of actions, etc.) has been produced by nontrivial efforts of one or more individuals or mechanism" (Aarseth 94). In non-ergodic texts the reader is not actively involved in the determination of the sequence of the text. Although a reader does have to move his/her eyes to read a codex and can choose to rearrange the sequence in which s/he reads the text non-ergodic text exists in a codified material form that does not require the overt physical intervention of the reader to form the text. Videogames require a high level of non-trivial sustained

interaction on the part of the player to progress. The involvement of the player in videogames means that "standard concepts of narratology are not sufficient to explain the literary phenomena of [videogames], and certainly not their difference from other types of literature" (Aarseth, 111).

In ergodic literature the reader is constantly reminded of avenues of choices that were not made; a state of absence of possibility—an aporia. In videogames an aporia becomes a trope that "prevents us from making sense of the whole because we may not have access to a particular part" (Aarseth, 91). Each aporia allows games to become landscapes of affordances and missed opportunities. In games, novices struggle to find their way around a particular landscape, while experts attempt to find the hidden bonuses they may have missed in previous attempts. Finding successful and meaningful paths through chapters or levels of a game lead to what Aarseth calls epiphany. Aporia and epiphany work as mechanisms to heighten tension and rewards, as negative and positive conditioning of reading. This type of 'reading' makes games different than other modes of literature and discourse. "What above all makes [videogames] worthy of study is the fact that they present an alternative mode of discourse; a different type of textual pleasure" (Aarseth, 109).

Videogames as an ISA

Hidden within the alternative discourse of videogames is a mechanism of control that Louis Althusser calls *Ideological State Apparatuses* (ISA). For Althusser *the State* "Is a 'machine' of repression which enables the ruling classes to ensure their domination… [thru] the process of surplus-value extortion"(Althusser, 137). In Marxist

terms the ruling class is the bourgeoisie, but the concept can also be extended to dominant political dogma. Applied to videogames the State represents the dominant political milieu in the society that produces the videogame. For example, in *Rise of Nations* by Big Huge Games and Microsoft, the learning level imposes on the player the role of building a western nation. Not only are the characters unambiguously Caucasian, but the first town is named London.[xiv] The state in the game is a codification of political values found in the capitalist environment that produced it.

Althusser writes that every State uses *State Apparatus* to maintain power. He defines *State Apparatus* as a specialized mechanism of repression such as a prison and supplementary repressive mechanisms that intervene directly in specific circumstances found in the body politic. Two main types of State Apparatuses exist. The first type uses predominantly physical repression to enforce the system; the second type, called *Ideological State Apparatuses* use mechanisms of control that function predominantly through the reinforcement of ideology: where ideology is "the system of ideas and representations which dominate the mind of a [person] or a social group" (Althusser, 158). In *The Subject of Semiotics*, Kaja Silverman writes that

> Althusser would presumably include the apparatuses of cinematic enunciation in the category 'means of production,' and would agree… that the viewer is encouraged to establish a relationship not with those apparatuses themselves, but with their fictional representation….
> (Silverman, 216)

I presume that Althusser would also include videogames as 'means of production' and would agree that videogames, by allowing the gamer to establish a relationship with their fictional representations are mechanisms of control that dominate the mind of a gamer. Gaming is a mechanism of distributing dominant values of the cultural milieu, and "An ideology always exists in an apparatus, and its practice, or practices" (Althusser, 166) and ideology is "A 'representation' of the imaginary relationship of individuals to their real conditions of existence" (Althusser 162). Ideology is an imaginary distortion of the representations of the real world by the dominant political force of society as a means of perpetuating its own power and status.

In games like *Quake* and *Doom*, the videogame is the apparatus that allows an individual to associate with fictional representation. The hand or the weapon in the foreground of the interface becomes the seam of interaction between the imagined construction of the videogame and all of its ideological subtexts of power and the player who establishes a relationship with the fictional representation. This association between the individual (the player) and a hybrid of the individual and the onscreen subject (the gamer) is what Silverman (borrowing from Althusser) calls *interpellation*. For Silverman, "Interpellation designates the conjunction of imaginary and symbolic transactions which results in the subject's insertion into an already existing discourse" (Silverman, 219). The existing discourses in videogames constitute the mechanisms of control, the *Ideological Apparatuses (IA)*. The game is the 'material' metatext of ideology.

As the videogame industry grows, and the technology of games advances, videogames offer increasingly more opportunities as ideological metatexts. One site featuring flash based games, for example, as several versions of a game promoting the US war on terrorism. In one version you are a sniper who shoots at images of Saddam Hussein and Osama Bin Laden. In another, version you are an American solder protecting civilians from terrorists. [xv] These games written by Flash savvy author(s)/programmer(s) demonstrate the opportunities for ideological commentary that technology offers individuals as a means of production. While playing videogames does force Gamers to accept the systemic ideologies in the games they play, the disciplines of technology open up new opportunities for individual social, political, and even economic production. Besides being IA's, videogames are ideological apparatuses of technologically savvy individual propagandists. [xvi]

[vi] A discourse community according to Swales is primarily a sociorhetorical structure whose "primary determinants of linguistic behavior are functional." A discourse community "consists of a group of people who link up in order to pursue objectives that are prior to those of socialization and solidarity, even if these latter should consequently occur.

[vii] Videogame packaging and art are an aspect of game culture that is quickly being lost. I was unable to find any archiving project involving videogame packaging or art as a cultural artifact. This may be one area of cultural studies worthy of pursuit.

[viii] Accessed August 6, 2003 at 2:10 pm MST.

[ix] The panoptic mechanisms by which games impose rules (or disciplines), and allow for meaningful interaction will be further discussed in later chapters.

[x] The speed and complexity of the games teach children romanticized hyper-violence that allows them to become desensitized to real violence.

[xi] Although this point will be challenged later since videogames as panoptic interfaces can be said to ' produce' identity and personas-- an argument touched on by Sherry Turkle in her book *Life on the Screen*, in reference to MUDs/MOOs.

[xii] This of course is also a contestable classification as there clearly is a subclass of user, of which I would consider myself a member, who use their leisure time to learn 'productive' software and get thrills for moving up levels of proficiency in applications like AutoCAD and 3-D studio Max.

[xiii] I am of course being a bit cheeky here since Hamlet is far from Codified and contains many variations between the folios, suggesting that even a 'reading' experience of a text can be different depending on the edition.

[xiv] Exeter and other British cities follow as you expand your territory.

[xv] A sample game can be downloaded at http://www.newgrounds.com/games/shooting.html.

[xvi] Here is the main shortcoming of Althusser's argument applied to videogames; it fails to account for the benefits that technology offers the individual and where Foucault's theory of panoptic mechanism extends my analysis.

Chapter 2: Purveyors of Posthuman ideology

Understanding videogames as Ideological Apparatuses raises two important questions. What are the mechanisms of ideological dissemination and what characteristic ideology or ideologies can be found in the medium? In our society the mechanism of ideological dissemination include many apparent institutions like cinema, Television, and newspapers, but they also include less prominent, more subtle forms of ideological indoctrination. Videogames are a medium of ideology.

Suture: The seam of ideology

In film, "Shot relationships are seen as the equivalent of syntactic ones in linguistic discourse, as the agency whereby meaning emerges and a subject-position is constructed for the viewer" (Silverman, 201). Shots are often merged together by a process called suture. "'Suture' is the name given to the procedures by means of which cinematic texts confer subjectivity upon their viewers" (Silverman, 195). The shot/reverse shot formation, according to some theoreticians, is synonymous with the operations of suture. "The shot/reverse shot formation is a cinematic set in which the second shot shows the field from which the first shot is assumed to have been taken" (Silverman, 201). The linking of two 180° shots is an 'unrealistic' panorama that defines a larger space than what the human eye is capable of covering at once.[xvii] The shot/reverse shot denies the existence of the technology of enunciation--the camera--and establishes the illusion that what is being shown is autonomous from technological intervention. One basic application of the suture in film is the insertion of the viewer into the space of a fictional subject. When Shot 1 contains a character and Shot 2 is the

reverse field of vision, the viewer is placed into the discursive space of the fictional character through the illusion that the perspective 'belongs' to the character. Silverman notes that other theoreticians of suture have extended the concept to include operations of the editing process common to all transitions as the process of interpolating the viewer with the subject.

Atari's 1983 *Ms. Pac-Man* ad in Appendix II can be read through a process of several sutures. The ad is actually comprised of two frames. The two frames or shots are virtually mirror images but subtle differences in the background tell the reader that they are different subjects. The two subjects are separated by a boundary that both segregates and relates the two depictions. The similarity of the two 'worlds' across a boundary sets up a rhetorical ellipsis that equates two different subjects across a boundary—the same framework that exists between the player and his or her on-screen representation. The advertisement also engages the viewer by asking the directed question "Which player is eating twice as much?" The question's rhetoric establishes a discourse-space for a Gamer within the depictions of Ms. Pac-Man. A knowledgeable reader, i.e. one who has played the game, will identify with the 'Gamer' space and will be able to answer the question by drawing on past personal experiences. A novice reader engaged through the curiosity inspired by the question, is given instructions as to how s/he should enter the 'game' space, and become a Gamer. The suture between two depictions of subject allows for the reader to enter into the discourse forming a triangular process of identification. The depictions are identified with each other as representations of different players, and the reader identifies him/herself as a player or potential player. The identification

happens because of an interaction between the reader and the media, through the very interpolation mentioned by Althusser.

In videogames the suture is not between two shots but between two 'real-time' environments. Shot 1 is the environment of the player, the 'real' world. Shot 2 is the world of the videogame, the world of the machine. The interface between the human and the machine is the suture that allows the player to be placed in the discursive space of the machine to form a new identity as Gamer. In her essay, "First-Person Shooters—A Game Apparatus," Sue Morris writes that in First-Person Shooters (FPS) the "identification… is established more directly through the constant first-person point of view, the player's own sense of agency and experience of interactivity." Although Morris' definition of 'suture'—an interplays of looks between characters is too restrictive to be useful in videogames her analysis—when extended helps to shed light on videogames as an ideological apparatus.[xviii] Morris writes that "The player is placed in the scene not only by the first-person point of view but also by his or her total control over this point of view." The mechanism of suture in videogames is the gestural correspondence between the player's physical movement and the response of the on-screen subject with which the player interpolates. The interface allows the player to associate with the on-screen subject by giving the player "a sense of the player's embodiment within the game space" (Morris 89).

A suture, for the purpose of videogame analysis is any videogame mechanism--such as interactivity--that forms an association between the player and the on-screen subject. The association that sutures allow in videogames place the Gamers into

discursive positions that provide the "illusion of a stable and continuous identity… to re-articulate the existing symbolic order in ideologically orthodox ways" (Silverman, 221). The Gamer's interpellation or insertion into the text of the game through the system of sutures imposes onto the Gamer the ideological mechanisms of that game. The videogame functions as an *Ideological Apparatus* of culture that sutures the human with the machine to produce the posthuman. The suture between the player and the game to produce the gamer is a process given meaning by posthuman ideology.

Post-Human

> The posthuman subject is an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction. (Hayles 3)

According to Hayles in *How We Became Posthuman*, a convenient point of departure between human and posthuman lies in the humanist tradition that the individual owes nothing to society and is in essence free from the will of others. She maintains that the liberal humanist tradition inherited from Hobbes and Locke constructed the human condition as a "state of nature".[xix] Ownership of the self is fundamental to humanist philosophy; a view held as self-evident that all humans were created equal with certain unalienable Rights that, according to the Declaration of Independence of the United States include 'Life, Liberty and the pursuit of Happiness'. Where Hayles maintains that posthumanism differs from humanism is not in the presence of non-biological components, but rather in the construction of 'distributed' heterogeneous subjectivity. She uses the example of Robocop's memory flashes interspersed with program directives

to demonstrate this localized and yet distributed cognition that constructs the posthuman self. Robocop exists as both the individual and the socially manufactured being, and his mental self has plural agents of subjectivity, each interacting to form the greater 'whole'. The process of making Robocop is the summation of the posthuman view.

As the Robocop character regains his human memory, the backflashes he experiences throughout the movie reveal identity to be a series of associations dispersed within an 'information pattern' rather than an embodied material instantiation. He remembers he is Alec Murphy, despite the replacement of the majority of his brain and body by machines. In the process, the reaffirmation of his identity situates consciousness as an epiphenomenon of information, implying that the body is a prosthesis we will one day be able to replace without losing our continuation of self. Just as Robocop represents an amalgam of identities, for Hayles the posthuman future is an amalgam of both technological dreams and cyber-nightmares where posthuman beings sit on the fence of possibilities between the promise of information technologies embedded in a material world, and a future of bodies as fashion accessories of unlimited power and disembodied immortality.

Whereas liberal humanism marks a distinct departure from spirituality by privileging the material body over the spirit and considering the soul as the epiphenomenal, the posthuman point of view reveals four distinct departures. Hayles maintains the following distinctions: the privileging of pattern over material embodiment; the view of consciousness as an epiphenomenon; the treatment of the body as the original prosthesis; and configuration the human being as a seamless articulation with intelligent

machines. For Hayles, "it is not a question of leave the body behind but rather of extending embodied awareness in highly specific, local, and material ways that would be impossible without electronic prosthesis" (pp. 2-3). Where the human was articulated as a product of nature, the posthuman view articulates its own identity as the product of manipulation. Whether that manipulation is seen in forms of technological intervention or augmentation of the natural body processes, the posthuman self is a distributed self because it is the product of construction.

From a biological perspective, posthuman construction can be imagined in two distinct, though eventually overlapping forms: genetic engineering and mechanical augmentation. From a biological view the posthuman body is the target of technological, scientific, and medical imperialism. Posthumanism of the body represents the intervention, intrusion, and distribution of the body on molecular and cellular levels. It is the policy of invasion made palatable by competition encouraged through the consumer culture of "keeping up with the Joneses." Technological augmentation has become an acceptable personal choice. From Botox injections and liposuction to laser eye surgery and contact lenses, technology is being used to augment body functions on unprecedented scales. Fukuyama, in his book *Our Posthuman Future*, observes that our posthuman future is an eugenic, ideological one. Unlike early 20th century state-imposed social improvement strategies, such as the forced sterilization of those deemed 'unfit,' or the policies of genocide of Nazi Germany, the eugenics of the future will enter the realm of personal choice. When faced with options for self-improvement to increase individual fitness in a social system that stresses progress and advancement, individual citizens,

parents, and corporate bodies alike will be placed in positions where enhancement is seen as a necessity of survival rather than just a social choice.

Faced with biological choice, as engineering technology continually moves from science fiction into common practice, parents will face the inevitable choice of screening and eventually improving their children. As the doctor tells Vincent's parents in the 1997 movie *GATTACA* , "It will still be you, just the very best of you." And so Vincent's brother is 'born'. *GATTACA* , by director Andrew Niccol, explores the potential dystopia created by biological posthumanism, where the social standard of individual fitness is based on the genetic augmentation of the human. *GATTACA* depicts a society in which 'natural birth' or Love-children have become taboo choices and where unmodified humans are prejudged by the potential of their genes and relegated to margins of society. Unmodified humans occupy unwanted spaces; they are deemed in-valid, and are only permitted to participate in the lower echelons of society. As the protagonist, Vincent Freeman notes, "Why should [an institution] invest into an individual who is likely to die in his early thirties?"

Billed as a movie about the human spirit, *GATTACA* is the story of Vincent Freeman as he sets out to "cheat" this system by disguising and supplementing his body. Through determination, hard work, science, and the magic of movie medicine, Vincent Freeman changes his height, disguises his heart rate, and camouflages his genetic status. In a society guided by social Darwinism, where the human--a non-augmented individual whose genetic code is a product of random neutral drift-- is at a clear dIAdvantage when compared to genetically enhanced posthumans, Vincent Freeman's choice to cede to

medical imperialism over his body is not a choice at all. The underlining social values of his society necessitate the protagonist to adapt or be left behind. *GATTACA* represents forced collusion of the individual to the invasive and pervasive values of posthuman augmentation. Although Eugene, the donor of Vincent's borrowed genetic identity, tells Vincent that he got the better deal from the arrangement—because he only shared his body, while Vincent shared his dream—the underlining truth of the matter is that by assembling a distributed identity made up of a gallimaufry of parts, biological, medical, and even mechanical, Vincent is forced to sacrifice his humanity for his dream.

Although one reading of the movie is the victory of the human spirit over the social values imposed on an individual, it is a hollow victory at best. Freeman's victory is not so much a victory of the Human spirit, as the movie's tagline suggests, as it is a compromise to integrate the ability of science to fool social institutions that are predicated on the political ideology of the current capitalist system of Western societies. In a posthuman sense the only real differences between Vincent and his 'valid' brother Anton are those of timing and choice. Where Anton is augmented soon after conception without any conscious choice on his part, he is forever a prisoner of a material prison that he did not help construct. He allows his identity to be imposed by a society trapped in the body of the genetic code. Vincent, a Love-child whose genes are left to chance, chooses to reengineer his identity consciously; the walls of his identity are grafted with the body of another because he refuses to be defined by Ideological State Apparatuses. Vincent instead chooses the posthuman path and appropriates the Ideological State Apparatuses for his own benefit—he beats the system by using the system.

The genetic disparity between the two brothers creates a kind of sibling rivalry between the "old school" human and the posthuman citizen. Vincent represents the older model of human being, replete with imperfections of random, non-rational genetic recombination. Anton is the new human; one perfected through science and technology; one sculpted by ideology made flesh. In this future, Vincent is the future Caine who is faced with the perfect Abel. It is only Anton's near-death experience during their swim out into the ocean that yields Vincent's metaphorical death as a human being and his rebirth as a posthuman subject. The social system is stained with Biblical ambition and rivalry, based on deception and the death of the body.[xx] Although Vincent himself does not die, and does end up going into space, it is not without meaning that the donor of his new identity, the DNA brother that he adopts, chooses to die rather than live without the affirmation of his society. Inevitably, once Vincent's crime is revealed, he too, like Caine will be forced to pay through social alienation for the rest of his life.

GATTACA is the exploration of one possible posthuman future where genetic manipulation dictates the fitness of individuals of the future. But even if this reality comes to pass, according to Hans Moravec as well as others, this future will only prove an interim state in human progress. Ultimately, only so much manipulation is possible; there are only so many improvements that carbon-based life can present for the human experience. Eventually, humanity must reject the body as a sacrosanct vessel of life. Eventually, technology must invade and usurp the body. For Katherine Hayles, such mechanical posthuman invasion represents a nightmare in which humanity is "seduced by

fantasies of unlimited power and disembodied immortality," and "culture is inhabited by posthumans who regard their bodies as fashion accessories" (Hayles 5) .

For Hayles, Robocop represents the posthuman nightmare: a human, used as an experiment by dominant political forces that are seduced by notions of immortality. Yet Robocop also signifies the potential of the posthuman dream: he is a human able to integrate with a machine. His power, or more precisely the ideological impact of the movie, does not come from the imagined technology in the fictional character's posthuman mechanical body. The power of the narrative comes from Robocop's ability to integrate his humanity with his electronic prosthesis. We admire Robocop, we feel sympathy for the injustice done to him; but we also feel a little bit hopeful that he will ultimately right the wrongs done to him. The emotional association with the character through cinematic sutures between the viewer and the cyborg encourage the viewer to accept the posthuman suture between human and machine. Although cinema hides the mechanisms of enunciation, the mechanisms of enunciation in videogames allow each Gamer to become a 'Robocop' themselves by suturing the player with the machine. The rebirth of the player as the Gamer through the process of being sutured with technology is what Katherine Hayles calls the posthuman view. The identity of Gamer is one that privileges information pattern where consciousness is a kind of epiphenomenon and positions the body as a prosthesis that can be augmented by being seamlessly articulated with intelligent machines.

In the posthuman self the articulation of identity may be seamless, but the material extension of the body through electronic prosthesis is not. For Robocop the

metal cuts into the flesh and gashes of skin become the sutures of identity between the human and the machine. At the seam, at the meeting place between two identifiable bodies, is where the posthuman-self emerges. The posthuman view is concerned with the construction of the seam, or the interface, between what was once Alex Murphy and what has become a cyborg. Posthumanism is concerned with how boundaries are created and erased between the human and the cyborg; between the human and the posthuman; between the body and embodiment; between the player and the Gamer.

The suture between the human and the machine is a process common to all videogames. The scars between the human and the machine are points of contact and interaction: the domain of the interface. Understanding how the interface of videogames functions as a mechanism of ideological control and individual production becomes a realization of the interface as panoptic mechanism.

[xvii] A more than 'human,' or post-human perspective is achieved in videogames using the augmentation of the player by a machine.

[xviii] She defines 'suture' as the "theoretical identification with a transcendental subject… which draw the spectator into the interplay of looks between characters" (Morris 89). But her understanding of the concept is far too literal and therefore limiting.

[xix] Locke's understanding of the human as a blank slate is very much along the lines of what Provenzo argues about videogame violence that will be addressed in a later chapter.

[xx] The Bible is in my opinion a great example of Ideological State Apparatus. It might be interesting in the future to use the Bible as a subtext for reading videogames.

Chapter 3: Panopticon and the Interface

On a warm August day in 1971, Dr Zimbardo, a psychology professor at Stanford University, began the Stanford Prison Experiment. Volunteers--young men, college students with no previous jail experiences--were "arrested" for violation of California's Penal Codes 211, Armed Robbery and Burglary, 459 PC. According to Zimbardo, the volunteers were "24 college students from the U.S. and Canada who happened to be in the Stanford area and wanted to earn $15/day by participating in a study." They were divided randomly into two groups: prisoners and guards. The prisoners were given no special instructions to play their 'voluntary' roles; the guards were given the mandate to keep the prison operational: to keep the peace, but they received no other specific instructions or special training on how to do so. The premise seemed simple: 14 days of monitored role-playing; a kind of simple prison game. A serious game.

Neither the prisoners nor the guards seemed to have any problems role-playing. The prisoners staged a rebellion on the morning of the second day, and the guards, deciding to meet force with force, used fire extinguishers to strip and subdue the prisoners. The ringleader of the rebellion was placed in solitary confinement while the others were left in their cells naked and without beds. As the days went on, the guards became increasingly aggressive in their attempts to keep order; the college men became increasingly authoritarian and brutal. The prisoners responded by becoming more individuated—more willing to give up their identity and accept disciplinary designations. The dehumanization continued until the same prisoners that had staged a riot on the second day began to relate to rebels as troublemakers rather than heroes.

As the simulation continued, it became more and more evident that the 'regular' volunteers divided at random were being changed by the 'game'. Dr. Zimbardo writes that

> We had learned through videotapes that the guards were escalating their abuse of prisoners in the middle of the night when they thought no researchers were watching and the experiment was "off." Their boredom had driven them to ever more pornographic and degrading abuse of the prisoners.

Witnessing such brutality, none of the 50 or more external observers questioned the merits of the experiment, until finally Christina Maslach, a recent Stanford graduate at the time, stated out loud, "It's terrible what you are doing to these boys!" And after only six of 14 days, the Stanford Prison Experiment was aborted.

The experiment turned college students into sadists, and average young men into dehumanized victims of authoritarian justice, all because they volunteered to play a game, a role-playing game. Although the Stanford Prison Experiment is long since over, the socio-political principles governing its interaction have become a major force in social theory. The experiment questions the nature of evil. Is evil an aspect of human nature brought out by technology? Or is evil the result of technology? Are mechanisms of socio-political dominance, the *State Apparatuses* responsible for violence and evil? Or does the mechanism of a *State Apparatuses* attempt to repress the evil of human nature? Either the technology of the prison was responsible for *changing* the 'boys' in the experiment into prisoners and guards, or the role-playing exercise only *allowed* the

expression of aspects of the human condition that were already present in the young men's psyche. The former blames the technology, and the later is biological determinism. I suggest that there is a third way of understanding the experiment, a posthuman view that places responsibility on both the human and the technology. In my reading, the technology, like the technology of videogames, both imposes Althusser's mechanisms of State control, and sutures the human with the technology to produce new emergent identities. Using the panoptic approach to read the Stanford experiment enriches the understanding of videogames as both ideological state apparatuses and modes of individual production.

The Prison Machine

A prison is an architectural technology of discipline and identity. A prison uses physical space to impose member roles. Jeremy Bentham, an 18th-century writer, envisioned the architecture of the perfect prison to be what he called the Panopticon. Based on lines of sight and disproportionate power structure his prison was

> At the periphery, an annular building; at the centre, a tower; this tower is pierced with wide windows that open onto the inner side of the ring; the peripheric building is divided into cells, each of which extends the whole width of the building; they have two windows, one on the inside, corresponding to the windows of the tower; the other, on the outside, allows the light to cross the cell from one end to the other. (Foucault 200)

The design of Bentham's Panopticon allows guards, located in the central tower to observe without being seen. The blinds, used to ensure that an authoritarian gaze is

hidden, leaves prisoners with the ambiguity of never knowing when they are being watched, forcing them to internalize discipline to avoid punishment. The (multiple) windows of the prison cells ensure that prisoners cannot hide from the panoptic gaze. So the architecture alone uses the available space to impose identity on both the guards and the prisoners.

The 'space' in a videogame functions in very much the same way as Bentham's architectural Panopticon. The walls of the video prison are both the physical limitations of the current imaging technology—that is, the resolution and type of display—as well as the database of visual elements available to render. Just like the walls of a prison discipline a prisoner's motions, the interface and how a program parses the input from the interface into a semiotic machine code both limit the range and type of interaction between the Human and the machine. Those limitations of interaction, the buttons on the joystick, or the series of key strokes needed to perform a special move, become imposed as disciplines on the body of the Gamer. This interaction is illuminated by what Foucault calls a panoptic mechanism.

Building on Bentham's material technology, Michel Foucault, in his book, *Discipline & Punish: the Birth of the Prison*, extended the Panopticon into an immaterial pattern of experience and power relations. Foucault's version of the Panopticon is

> The diagram of a mechanism of power reduced to its ideal form; its functioning, abstracted from any obstacle, resistance or friction, must be represented as a pure architectural and optical system: it is in fact a figure

> of political technology that may and must be detached from any specific use. (Foucault 205)

By dissociating the Panopticon from any specific use, Foucault has provide a critical framework for the analysis of social mechanisms of interaction and identity formation.

At the heart of both the architectural and abstracted panoptic mechanism is the "interface," which can be articulated as the surface of contact between two discrete systems, events, or things. The interface is the scar from the suturing of two distinct parts into one whole. It represents the meeting-point at which surfaces exchange, change, restrict, and resist inscription and incorporation with each other. In Bentham's example, the interface is the channel of communication that mediates and maintains the power relations between guard and prisoner. The 'windows' at either end of a prisoner's cell, and the windows through which the guards may observe prisoner behaviour, form the medium of interaction for the architectural technology of Bentham's ideal prison. The technology of the architecture individuates the prisoner into a unitary identity between the boundaries of the observed cell. The prisoner is both a construct of the boundaries of the panoptic cell and a liberal-humanist ideal trapped within the minute details of discipline imposed on the individuated self. For Foucault, the interface is the point of interaction that facilitates the internalization of discipline and the projection of an individuated product of behaviour. Read as a posthuman text, a Foucauldian panoptic interface is the seam between the human and the machine, the hyphen between 'post' and 'human.'

In videogames, as in the original theoretical Panoptic prison, that interface, the hyphen between the human and the posthuman, is an optical system that at once privileges the user both as the central eye gazing at the machine and the subject of machine as surveillance. On the one hand, the interface lends the Gamer the affordances of interaction with the game, but the interface is also a mechanism of surveying the Gamer's input. The blinking cursor tracks every movement of interaction, codes every event at its boundary. The interface can be read as a panoptic-mechanism in three interrelated ways: the technology of the interface hides the architecture of surveillance; the surveillance is a system of disciplines; the disciplines individuate the user. The interface replaces the guardian by "a multiplicity [of interactions] that can be numbered and supervised" (201). Every process performed by the machine is mediated by the code of interaction. The architecture of interface technology is the gaze of the disciplinarian: the perfect disciplinarian. In the ideal interface, "A central point would be both the source of light illuminating everything that must be known; a perfect eye that nothing would escape and a centre towards which all gazes would be turned (Foucault, 173). It is the gazes of the interface, the perfect eye of the machine that is constantly fixed on the user. The hardware and software of the machine have no need for rest and no need to divide their attention between multiple bodies. It sits and waits, watching for interaction at the boundary; recording, calculating, responding to each disciplined gesture of the user.

Videogames are designed to sit and wait for the Gamer. When turned on, they wait for a game to be started; when being played the wait for the Gamer's input. They

are the Gamer's panoptic guards who reward for correct inputs and penalize for mistaken or absent input.[xxi] The game becomes the mechanism of enunciation for the suture between the individual and the ideologies it embodies. The game is the patient guard enforcing the suture between the player and the ideological mechanism it perpetuates.

The interface itself is the ideal gaze that notes every event of interaction. The interface processes the interaction, categorizes the event, and responds with the punishment or reward that the ideology of the apparatus requires. The interface engages the user with systems of conduct and symbolic identity markers that work through imagination and interpellation into symbolic subjects. The gaze of the interface is not a literal eye of the disciplinarian hidden behind a screen, but it is the internalized processes of self-regulation on the part of the user. The gaze is the built-in confines of the system that surround and entrench the user within specific technological limits—the mechanisms that underline the ideological apparatus of the system. The walls of the interface are not brick and mortar, but the very codes of the mechanisms of interaction that are responsible for situating a user as the citizen of a particular ideological space. When a user is unable to recognize or decode the interactions hidden by the interface (the mechanisms of enunciation), he or she must conform to its limitations in a process of self-regulation in order to belong within the social system that the technology represents. The very keys on the keyboard categorize interaction and allow the user to construct a meaningful event. The keys discipline the user to perform specific tasks for successful interaction; meanwhile the interface watches. And the interface responds, using both positive and

negative conditioning; the interface disciplines the user into imposed conformity, citizenry, and self-regulation.

Like other technologies of discipline, the self-regulation enforced by the disciplinary gaze of the interface creates the identity of the user. How the user spells words in a program like MS Word is mediated by several disciplinary mechanisms. The program underlines words it does not recognize, and the autocorrect function automatically replaces words the program recognizes as 'misspelled' according to its panoptic code. The user 'learns' to correct 'mistakes' as an automatic response to the information presented at the interface, never considering that the codification of language is a recent invention or that the evolution of language depends on rule-breaking.[xxii] How that user reacts to the 'corrective' feedback of the machine through the interface mediates the normalizing confines placed on their identity—re-adjusting the power of identity creation on the disciplinary gaze focused at the interface.

Surveillance as a system of disciplines

The interface is a system of disciplines designed to facilitate the tasks of interaction. The interface penetrates the user by forcing upon him/her the dIAssembly of tasks into specific gestural articulations, "each movement is assigned a direction, an aptitude, a duration:" two clicks of a mouse initiate a program and a series of key strokes become "Meticulous controls of power" (Foucault 152). The interface coordinates gestures to promote efficient interaction, disciplined use of time. Foucault writes that

> Discipline fixes; it arrests or regulates movements; it clears up confusion; it dissipates compact groupings of individuals wandering about the

> country in unpredictable ways; it establishes calculated distributions. (Foucault 219).

The interface as a mechanism of discipline regulates the movements of the user. It forces the user to perform closely controlled tasks in order to achieve a desired response. Its architectural and optical systems impose regularity on a multiplicity of individual operations and particular behaviours that work to establish patterns of Human-Machine interaction unique to the biomechanical user. Apple Macintosh users to this day still place the semiotic representation of disks in the 'trash' as a conditioned behaviour to reclaim the material substrate (i.e. the physical disc). The act of throwing a symbol way in order to reclaim the physical body is a learned behaviour unique to that specific Human-Machine interface; Macintosh users every day still perform this disciplined ritual despite the fact that many software critics have insisted that the discipline is counterintuitive.

The user is no more than a mouse and the interface is the maze whose disciplined circumvention may lead to the cheese. An act as mundane as handwriting represents a correlation of the body and disciplinary gesture. Good handwriting "presupposes a gymnastics—a whole routine whose rigorous code invests the body in its entirety, from the points of the feet to the tips of the index finger" (Foucault 152). A Keyboard shortcut is no less a form of finger gymnastics. A keyboard shortcut presupposes an externally taught mediation with the interface to increase efficiency; to better utilize the tool; to reach faster, the cheese of interaction. For Foucault, "Discipline is a political anatomy of detail" (139), and a keystroke, therefore, is more than just a boundary of

communication—it is the articulation of desire through the demonstration of detailed knowledge imposed by the machine onto the human, onto the body.

The physical disciplines or maneuvers of interaction place the user on par with the soldier, the student, and the prisoner—as a subject of disciplinary power that has been produced from a "coercive link with the apparatus of production" (153). The system of disciplines enacted on the user—disciplines that are inevitably incorporated into an imposed identity of that user--are maneuvers designed to improve the interactions between humans and machines, and are based on 'natural and organic' principles. But since the maneuvers are inevitably analytical, cellular, and universalizing, they impose meticulous controls of power onto the identity of the user. Our disciplined interaction at the interface governs how we express our identities at the posthuman boundary between the human and the machine.

Video-prison

Videogames are panoptic interfaces that both impose discipline and allow for identity production. How are videogames panoptic mechanisms? Drawing on Foucault's definition of the Panopticon, the optimal interface can be described as the mechanisms of power that efficiently control the flow of information. The subject is "seen, but he does not see; he is the object of information, never a subject in communication" (Foucault 200). The interface establishes a similar information paradigm where the user is 'seen[xxiii]', but is completely unaware of the code central to the interaction. Bound within the confines of this surveillance, uncertain of when s/he is being observed, the subject in

a Panopticon internalizes discipline into an imposed self-regulating identity. Foucault writes that

> He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection. (Foucault 203)

The Panopticon works because the subject is aware of a field of visibility and believes that s/he is trapped within the gaze of surveillance. The control depends on the threat of observation, and the segmentation of the individual into an individuated part of a system. But when the interaction between subject and agent of the Panopticon are localized through an interface, the Panopticon becomes an ideal political tool of power, hiding the corporeal and systemic limitations of the disciplinarian behind the interface of technology.

The walls of the Panopticon define the space afforded for psychological movement, the virtual topography in which an individual is allowed to express the self, mediated by the technologies of self-expression. The technology of communication becomes the champion of self-expression, rather than just a normalizing force exerted on embodiment. Within the metaphorical walls of the technology of the videogame the Gamer/ prisoner is allowed room for 'choice'. In *Diablo II,* for example, the Gamer must perform a specific set of actions in order to advance the narrative. But within the context of the narrative, the Gamer is allowed room for self-assertion. A Gamer is allowed to

explore maps and improve his/her character by following non-essential narrative strings within the game world. Not every affordance of the videogame world must be pursued to keep playing, so the gamer has room to make choices and devise personal strategies of interaction.

A videogame interface functions in an analogous means to the Panopticon. The interface is both visible and invisible: "Visible: the [user] will constantly have before his eyes the [white screen, cursor blinking, aliens running] from which s/he is spied upon. Unverifiable: the [user] must never know [how the code is functioning]" (Foucault 201). Like the Panopticon, an ideal interface functions like a perfect disciplinary apparatus: it "[makes] it possible for a single gaze to see everything constantly" (Foucault 173). The interface mediates all interaction, but is so completely unverifiable as a mechanism of discipline that the user is convinced that they, as the user, are at the centre of the Panopticon, an agent of surveillance. The illusion of the interface allows for the suture between the individual user and the subject of the semiotic onscreen code, grafting a singular identity within the IA of the game. The secretary or office worker who sits at the interface of the machine believes they are at the center of the panoptic tower. Navigating through windows, the user exerts power over the system; the user has agency over the tasks being performed, over the windows in the foreground. But the windows already relegated to the margins (already minimized in the taskbar) continue to function, continue to perform, although not under direct surveillance. They perform because the interface of the entire operating system is judged by the user on both the direct interaction with the immediate tasks and by the successful execution of unsupervised mechanisms of

disciplined execution. The individual at the interface is empowered through the windows of the computer. The user is the beneficiary of the systems increased efficiency and improved information flow. In the ideal interface the user's single gaze sees everything and is informed of everything worth knowing. The interface creates a panoptic mechanism of power within the user which simultaneously, as Foucault had suggested about the Panopticon, enslaves the channels of communication and interactions of the user.

The modern interface, whether just software or both software and hardware are included in the definition, is the boundary of HCI that places the human both at the centre of a panoptic mechanism and as the subject of its surveillance. The interface is a system of that imposes a metaphor about how we see ourselves. As Sherry Turkle writes in *Identity in the Age of the Internet*:

> The development of windows for computer interfaces was a technical innovation motivated by the desire to get people working more efficiently by cycling through different applications. But in the daily practice of many computer users, windows have become a power metaphor for thinking about the self as a multiple, distributed system (Turkle 18)

Turkle cites that, for some users, reality is nothing more than another window on their desktop—and not necessarily the most inviting one. Human identity becomes articulated in terms of how we construct our interfaces. The very tool to improve the interaction with the machine has become a system for the machine to individuate the user. User preferences, for example, that follow users to different terminals in a networked office

create profiles of identity that impose on the individual their personal settings and modes of interacting with the machine.[xxiv]

The computer is not simply a mechanism of increased performance, a slave to the user-guard. The machine itself is an agent of power, of control, of surveillance. The interface enslaves the user just as it is the user's slave. Foucault writes that "there is no risk… that the increase of power created by the panoptic machine may degenerate into [human] tyranny," (Foucault 207) because the machine is an agent of surveillance. The guard is also a subject of surveillance, so power is distributed. The very interface that empowers the user, that allows the user to perform, that extends the worker's abilities, is a mechanism of power and dependence. Disciplined by social expectations of conduct, the user becomes hybridized with the interface, dependant on the technology for his/her augmentation. The interface is a microscope of conduct. The user depends on the machine, on the addictive enabling power of the technology—e-mail cannot be checked without the machine—and the machine becomes a microscope of conduct, imparting on to the user levels of performance based on interaction with the interface.

Foucault's Panopticon is a type of *Ideological State Apparatus,* which works primarily via ideology (although not entirely without repression). But whereas Althusser maintains that the mechanism has to be material, Foucault ventures into the topography of the psyche: Foucault's Panopticon is the internalization of discipline through the body (a kind of repression of the body) that allows for production. Rather than being just a tool of the State, the panoptic-mechanism is also a tool of the individual; benefits of discipline can move in both directions. Althusser's *State Apparatus* only take into

account movement from dominant body to the individual without accounting how the discipline benefits the subject of the discipline (the worker).

Posthuman interface and videogames

As the meeting point between the human and the machine, the interface has become an increasingly complex concept. Deborah Lupton writes in *The Embodied Computer/user* that the "computer/human dyad" is more than a case of simply "self versus other[;] there is for many people a blurring of the boundaries between the embodied self and the PC" (Lupton, 478). Due to the projection of identity and the investment of the self into our machines, the boundaries of the human-machine discontinuity have become a kind of virtual space of psycho-topography. This psycho-topography is highly visible through videogame interfaces. Videogames provide a virtual space that can be explored and invested in. In Bioware's *NeverWinter Nights* (2003), a gamer is presented with a virtual landscape in which to create character and invest identity. The game is more than just an interface for algorithms and code; it becomes a possible world, a vessel for projected personae, a persona that is developed through interactions with both 'real' players and computer mediated avatars who become players in the Gamer's narrative experience. The landscape of the videogame and the interaction with a personified avatar filled with emotional identification blurs the boundary between self and other. As a result of this blurring between the self and other, Allucquere Rosanne Stone writes in her essay, "Will the Real Body Please Stand Up?" that

> As Baudrillard and others have pointed out, the boundaries between technology and nature are themselves in the midst of a deep restructuring.

> This means that many of the usual analytical categories have become unreliable for making the useful distinctions between the biological and the technological, the natural and artificial, the human and mechanical….
> (Stone 517)

Stone suggests that machines are best understood as projections of our shortcomings, successes, frustrations, and failures. Videogames are useful places at which to see those projections in action because they immerse the user in a simulated environment where 'real' world rules need not apply. The videogame is what Janet Murray calls a narrative micro-world of interaction where identities are produced, maintained, and changed.

Identities are not fixed concepts; identities are inscribed and described in relation to others. Katherine Woodard writes that "Identity is relational, and difference is established by *symbolic marking* in relation to others" (Woodard, 12). The symbolic markings of identity, the words we call ourselves (among other things) are historic and experiential; they are categorical labels based on the space between the self and the delineated 'other'. Predicated on notions of difference, identity depends on the meeting and interaction of two surfaces: the interface of two comparable systems, elements, or ideas. Since historically the line between humans and machines has been relatively distinguishable, machines have been viewed as antithetical to human identity rather than active agents helping to construct human identity.[xxv]

When human identity is juxtaposed to the machine, the symbolic markings of comparison form a kind of puzzle. Although the two pieces form a picture greater than

the sum of the individual parts, the interface, that line between the two pieces has always remained in focus, clearly delineating self from the Other. So each piece has represented a relational perception categorized as distinct and unique; one is nature, the other technology. But the very act of defining the self in relation to the other implies a basis of similarity for comparison between the two: a surface of interaction; a sutured seam of interpellation. As the interactions at that surface become more symbiotic and more entwined, that surface becomes more intertwined, and the suture becomes more complete. As Lupton and Stone are suggesting, the more intricate the interface becomes, or the more attention that is paid to the resulting whole, the more the identities of the component parts collapse into each other and "If nature and technology seem to be collapsing into each other, as Haraway and others claim, then the unhumans can be lively too" (Stone, 504). So the unhuman, the computer, becomes a lively agent of human identity. At this space of interaction is where Haraway's cyborg is born and Hayles' posthuman becomes embodied. The blurring of definitions between the human and the machine are identity traffic across the boundary of the interface.

When a comrade in simulated warfare instructs you to engage the enemy in Microsoft's *Halo* (2003) for the X-box, a gamer does not respond like a high school student being asked to engage with a complex mathematical formula. Instead, the gamer reacts (to some degree) as if s/he had been instructed by another person. The adrenaline and the immersive nature of videogame narratives allow for the association of the Gamer with the narrative being played out. The gamer is in actuality part author of the narrative. The more immersive the game, the more convincing the simulation, the greater the

potential for the interaction to become an active element of human identity formation, the virtual space in which human beings define themselves: identity-space.

The identity-space created by the surface meeting of humans and machines is governed by technological mechanisms understood here to be the interface. The posthuman interface of the videogame is at once an instance of a panoptic-mechanism and a polyvalent rhetorical space of identity discourse. It is the point that transfigures the human into the posthuman by privileging the machine over the individual.[xxvi] To understand the videogames is to understand the relationship that humanity has with its machines, to understand how we became Posthuman, and to understand the future role of the machines unwavering eye in human evolution.

[xxi] Some of the first generation videogames actually waited for user input. Game time was calculated in the number of user moves because without input nothing happened. Modern games usually engage the player. Now game time has its own chronology without the Gamer. If you stop interacting you usually get killed.

[xxii] Heteroglossia, Bakhtin!

[xxiii] Seen here is used to connote the act of becoming the subject of disciplinary information, which hopefully will be made clear later in the discussion.

[xxiv] But it is within the construct of this imposed identity that computers, as Turkle also argues, allows the projection of post-modern concepts of multiple identities through non-linear expressions of the self and constructed personas that can be seen on MUD's. Projected identities become the other pole of the interface discourse.

[xxv] This is really the heart of posthumanism, the switch to where machines help define us.

[xxvi] In Videogames this 'privilege' can be interpreted as the willingness of the Gamer to subject him/herself to the disciplines of the game. Gamers allow the machine to set the rules of interaction and are only allowed to project their identities within the acceptable channels provided by the game. A Gamer for instance, cannot program his/her own weapon, but is given a choice of many provided weapons through which to interact with the game.

Part II: Screenplay

Life on the screen lends itself to two distinct approaches for analysis: the Human/Benthamite approach and the Post-Human/Foucauldian approach. The variation in approaches highlights complex ideological differences in understanding the role of videogames in society. Scholars who read videogames using the Benthamite approach, like Provenzo, have a more limited view of videogames as primarily repressive mechanisms of discipline--a kind of monkey see, monkey do paradigm of interpellation with the imagined subject of the apparatus. The Foucaultian approach extends the analysis to explain how videogames can be both ideological state apparatuses and extend the boundaries of identity through suture only possible with the aide of electronic prosthetics. The next three chapters work to show the weaknesses of the Benthamite approach, then show how the Foucaultian analysis helps to understand the mechanisms of individual production coded into the medium.

Chapter 4: Discipline and Joysticks

In 1975 a B-movie was released that has one dubious honour in the history of videogames. *Death Race 2000* (1975), still sometimes shown on late night Sci-Fi specialty channels, inspired the 1976 game *Death Race* (1976). *Death Race (1976)* was a product of its time. Its graphics were minimalist, blocky and abstract. The game was designed to compete with *Destruction Derby (1976)*, when Chicago Coin, the company who bought *Destruction Derby (1976)* refused to pay royalties. According to Kauffman, initially sales did not meet expectations, but that soon changed.

Death Race (1976) has one significant variation from *Destruction Derby (1976).* In *Destruction Derby (1976),* players targeted other cars for destruction, but in *Death Race* (1976) the targets are stick figures. Although described as skeletons arisen from a nearby cemetery, the stick figures and the cross icon that appeared when they were run over were a little too close to implying murder for some people. *Death Race* (1976) sparked "protests and was even discussed on CBS's *60 Minutes* [not to mention Donahue]" (Kent 91)—sales improved, and a second version was even released.

Death Race 2000 (1975) inadvertently was responsible for the translation of B-grade film violence into the new medium. Violence in videogames sparked in 1976 a controversy that, when analyzed, has one prominent feature: that videogames directly influence behaviour. The concerned parents against videogame violence are in part attributing videogames with ideological and psychological disciplines that encourage Gamers to internalize behaviours that are then expressed in the 'real' world. This view places videogames as the most influential of Althusser's IA's because of their direct impact on behaviour. Videogames, arcades, and machines are positioned as highly effective; more effective and more politically dominating than the values parents are able (or perhaps willing) to teach their own children. A violent game like *Death Race* (1976), in this framework of abdicated responsibility, will ultimately condition a player to be emotionally insensitive to acts of violence; or, worse yet, to perpetrate acts of violence off the screen.[xxvii] Protesters against *Death Race*, and all other anti-violence advocates, are suggesting a direct suture between life on the screen and life in the real world.

Critics of videogame violence like Eugene Provenzo Jr who read videogames from a Benthamite perspective maintain that videogames are 'teaching machines' that romanticize violence and remove the natural consequences of getting out of control. [xxviii] Provenzo maintains that videogames remove the limits of embodiment and therefore remove the 'natural' limitations of game play (found in violent games like paintball). They teach and reinforce 'extreme' behaviour in children and adolescence. They discipline the body through the walls of an Ideological State Apparatus that completely subjugates the player.

The Benthamite approach used by critics like Provenzo fails to address Aristotle's notion of catharsis in Tragedy. Aristotle suggested that cathartic experiences are those which allow us to purge ourselves or immerse ourselves in feelings that we are reticent to express in our every day lives. A Tragedy becomes an opportunity for the viewer to purge themselves of emotions that they do not, may not, or cannot express in 'real' life. Understanding videogames as strict prisons of ideological behaviour overtly disregards the potential of videogames to be cathartic mechanism of expression.

A Benthamite analysis of computers in general, and videogames specifically, situates the technology as walls of discipline. Discipline is a type of power relation that categorizes and individuates the subject through details of the body. Born alongside Enlightenment liberties that establish generalized universal human norms, disciplines distribute a population based on distinct details of the body. The modern concept of the interface, the windows based environment on every desktop—of every desktop—is "not simply a hinge, a point of exchange between a mechanism of power and a function"

(Foucault 206), it is a panoptic mechanism. Technology is an agent of social persuasion and discipline—an Ideological State Apparatus. The keyboard, the joystick and the Xbox controller are all tools of social and technological power relations. Their architecture, their design, are 'petty mechanisms' "in the progressive objectification and the ever more subtle partitioning of individual behaviour" (Foucault 173). These very mechanisms that create the space of HCI are artifacts of social and technological power. Disciplines are a type of power relations that "assure the ordering of human multiplicities" (Foucault 218), whereas multiplicities are expressions of presence of a constructed political body.

In videogames, discipline based on presence can be read as an apparatus of political power. Applied to a specific apparatus which separates, coordinates, and oversees imposed tasks, the technology of 'presence' or the construct of 'the body' can be seen as a metaphoric incarnation of the technology of surveillance of Bentham's circular prison. Bentham's Panopticon is predicated on the limitations and boundaries imposed by disciplines enacted on the body. A prisoner is confined physically within a space based on material 'presence'. In Bentham's model the regulating power of discipline is ultimately an external force that acts on a particular individuated body. Just as a cell confines the prisoner, the modes of interaction designed into hardware and software of videogames could be seen as imprisoning the Gamer. The forces used to limit the Gamer are the channels of interaction built into the game. In Bentham's Panopticon the unique identity of the Player becomes secondary to 'presence' of the body of the player disciplined to interact within specific boundaries of conduct. Identity is imposed not by embodiment, but through repetitious interaction with the machine. The

game situates the player/prisoner within the walls of the Game and its ideology. The walls of all games are the physical disciplines of power that are conditioned through rules and based on the ideologies coded into the interaction. The Benthamite reading of videogames is a rhetorical ellipsis directly correlating violence in videogames with violence in society.

A Benthamite reading positions games as tools of ideological control that dominate the individual without taking into account the affordances that games offer. The repetitive interactions with games like *Red Alert*, where the player works to establish military supremacy over Russian invaders, are the material teaching tools of ideology. Microsoft's recent game *Freelancer* (2003), reads like the advertisement for US President Bush's War on Terror. The narrative of the game begins with an escape of 'Sleeper' ships from the tyranny and brutality of an oppressive militant regime. The Names of the sleeper ships of hope that escape prejudice to start a new free life, named after their patron states include the Britannia, the Rheinland, the Espania, the Casary,[xxix] and the Liberty. The plot places the player in the body of a character of the only survivor of an unknown terrorist attack on a space station. The fictional character is offered sympathy and becomes involved in the question to 'protect' the colonies against terrorist attacks. The very idea that you are a Freelancer places the player into the discursive space of opportunistic capitalism. A Benthamite reading would suggest that the game is an RSA that enforces a capitalist-protectionist agenda. In theory this would suggest that players of Freelancer would be conditioned to favor Bush's War on Terror, because videogames impose on a player ideologies and attitudes. This reading situates videogames not as

Ideological State Apparatuses, but as Repressive State Apparatuses-- employing predominantly repressive control mechanisms.

Imposed identities are the channels of allowed expression. Language itself imposes identity. Language allows the self to express embodied individual experiences in a code that is based on socially constructed norms. Red means red because we agree to it. Individual experiences of red may differ between individuals but they socially agree that the category of 'red' experiences is designated to the category red. The number of possible combinations of the resulting linguistic code based on an agreed association between signifier and signified allows for identity space in which embodiment is individuated and persuaded about the possibilities of citizenship formation. But as you start limiting the number of categories of differentiation, forms for expression become more limited. In a binary system an identity becomes a label, A or Not A; zero or one. The system of assigning labels or modes of expression (categories of identity) is a process of individuation, where an individual (a body) is categories by imposed systematic labelling disciplines.

Socio-technological networks determine how HCI is mediated by the interface are part of the 'black box' of identity imposed on every user. The gaze of the interface is a black box without physicality and Foucault writes that the panoptic mechanism when applied can be without physical weight.

> The external power may throw off its physical weight; it tends to the non-corporal; and, the more it approaches this limit, the more constant, profound and permanent are its effects: it is a perpetual victory that avoids

any physical confrontation and which is always decided in advance.

(Foucault 203)

The optimal interface is a 'black box' without 'physical weight'. Borrowing form cybernetics, Latour's concept of a black box implies an idea or technology that is deployed without intimate knowledge or an explanation of the functions of its internal mechanisms.[xxx] The most effective black box is one that is completely taken for granted as truth or reality. The optimal black box, like the optimal interface, is so seamless that it supports a network of ideas without stopping the flow of information. The panoptic interface would be so seamlessly integrated into the human identity that distinguishes between human and machine; the disciplinarian and the imposed discipline would become so invisible that the subject could no longer articulate the constraints of external power that the machine places on the individual. For Benthamite critics, this seamless interface, like that of nanotechnology directly integrated with the body, is a most frightening imposition of identity because of the direct and permanent effects on a society of 'users.' Conditioned by the reality imposed by the ideal interface the Human becomes a slave of the mechanically produced external referent. The articulation of what is human becomes based on machine regulated semiotic codes and ideologies.

A reading of videogames as technologies of discipline based on the Bentham's model implies that the violence taught through the rules and exercises in videogames have direct correlation to violence in the 'real' world. Provenzo writes that "Video and computer games are, in fact, highly effective teaching machines. You learn the rules, play the game get better at it, accumulate a higher score, and eventually win". He

maintains that what videogames are teaching is violence and that videogames are a cultural experiment akin to eugenics where, "It is very possible, that the people killed in the last few years as the result of 'school shootings' may in fact be the first victims/results of this experiment" (Provenzo, *Violence*, 47-48). Highlighting the Repressive nature of videogames does not go far enough to explain the nuances of the medium. As the movie *Bowling for Columbine* probes, if videogames are ideological apparatuses teaching violence, why are the rates of violence among youth in the United States higher than in Canada? Both countries have the same videogames. Videogames cannot be read as repressive mechanism of control; the reading is too simplistic.

In a Foucaultian Panopticon, the prisoner is a citizen of a particular discursive space and can, in relation to the disciplinary mechanisms of system produce an emergent identity. To have the rights of 'citizen,' the body must be situated in the space of 'citizen'. From a Foucaultian approach *Freelancer* is not an absolute concrete space of ideology. The player, as a citizen in of the fictional character in the Freelancer discourse has affordances for identity production. The game provides a miro-world that parallels Bush's protectionist-antiterrorist imperialistic ideology, but the player is not just a prisoner. The player is an active participant in the suture between the human and the machine. At the interface between the player and the game is the suture that creates the Gamer identity--a discursive space between the viewer (human) and the fictional (machine-mediated) subject. The interpellation of the player into subject produces the gamer identity. The gamer identity is a discursive space that allows for self expression relative to the ideology of the system. The player is not obligated to be locked into a

shoot-or-be-shot mentality because the player is an active part of the suture between the individual and the Ideological State Apparatus. The gamer may choose to participate in the narrative by 'losing the game.' Turning off a videogame because it lacks appeal is a form of expression that Provenzo and the Benthamite approach fail to address. Understanding videogames as mechanisms of panoptic control is only the surface layer of the analysis. Because videogames form a discursive space where the viewer is a participant in the apparatus, videogames also offer affordances for a player to position him/herself relative to the ideology presented.

Without acknowledging that videogames focus on pattern over presence, or that a virtual body can become a prosthetic for a construct of the body with in the virtual space of a game, allows critics to suggest that videogames are defense mechanisms for withdrawal, or that games like *Pac Man* are, "Largely [focused] around oral sadomasochistic fantasies of the fear of engulfment" (Provenzo 55), with a 'richly saturated autoerotic' element. Videogames may influence behaviour, but rather than teaching a direct correlation between simulated worlds and the real world, videogames teach us to respond to different disciplines imposed by different interfaces.

The videogame is based on multiple selves and simultaneous interaction. In the videogame, the self is fragmented in both time and space. Since *Space Invaders*, not only is the Gamer divided into the embodied player (the real world self) and his/her screen self, but the screen self is further subdivided into multiple incarnations and sometimes multiple virtual states. Videogames are models of more complex social interactions that allow Gamers to see the self as system of multiply distributed selves.

Where one type of behaviour maybe appropriate for one videogame, like *Doom*, the behaviour maybe complete inappropriate in other game like *Rollercoaster Tycoon*. Between what happens in a videogame and how it is incorporated into the self is the seam of posthuman ideology. The interface, although it imposes a structure on the human half of the information system, allows, within the imposed disciplines, for the extension of identity and the self.

[xxvii] This form of reasoning is contrary to many thousands of years of literary criticism. Aristotle in *Poetics* discusses catharsis in theater that actually benefits society because it allows for the 'safe' experience within the context of the play emotions that might other wise be damaging to the community.

[xxviii] Who is a professor of education at the University of Miami, the author of Children and Hyperreality: The Loss of the Real in Contemporary Childhood and Adolescence, and presented to the Senate Committee on Commerce, Science, and Transportation at a Marching 21 2000, hearing entitled "the Impact of Interactive Violence on Children."

[xxix] Presumably this is Russia because the name resounds with Czar as in the Russian word for king.

[xxx] Read Bruno Latour's Science in Action for a more indepth discussion of the political networks of black boxes.

Chapter 5: Equal Before the Interface

The computer "has become a significant social laboratory for experimenting with the constructions and reconstructions of self that characterize postmodern life" (Turkle 180). The computer is the hyphen between the unitary construction of the self so necessary for Liberal Humanism and the post-human pluralism that privileges pattern over presence. In the social laboratory of the computer game, the self and identity can be viewed in terms of Kenneth Gergen's "pastiche of personalities" in which "the test of competence is not so much the integrity of the whole but the apparent correct representation appearing at the right time, in the right context, not to the detriment of the rest of the internal 'collective'" (Turkle 256). Working along similar lines, Robert Lifton in *The Protean Self* challenges the dogma of a unitary self by exploring a healthy protean self capable of fluid transformations. The computer is central to the promotion of these fluid transformations between one self identity and another. The computer becomes a tool that extends Gergen's concept of the 'saturated self' to a self in which communication technology has enabled the 'colonization of each other's brains.' Whereas critics like Provenzo see danger and fragmentation, others see possibilities for discovery and transformation. The very videogames accused of being pointless and meaningless by some, are actually important cultural spaces of identity formation and citizenship. Videogames can be viewed as alternate subjectivities in the safety of a virtual environment that allows Gamers to explore aspects of identity they cannot pursuit in any other possible world.

The shift from unitary identity based on the body towards a pastiche of identity is the shift from Bentham's circular Panopticon to Foucault's panoptic mechanism of discipline. Once the walls of the Panopticon are removed and the process of discipline becomes internalized into the body, regulation becomes the infrastructure for production. Foucaultian readings of videogames must look at both the disciplines and ideologies imposed by the game, and the affordances for alternative subjectivities that the game space provides.

Foucault's panoptic mechanism and production!

The movement from Bentham to Foucault is the movement from the 'human' to the posthuman along the hyphen of identity and ideology. The walls of Bentham's Panopticon become weightless and self-imposed, and disciplines enacted on the body cross the semiotic boundary from prohibitive to productive. Whereas for Bentham the metaphorical mechanism of discipline is boundaries and limitations—the 'walls' of the cell—for Foucault, the metaphor of disciplinary mechanisms prioritises pattern over 'presence'.

For Foucault the panoptic-mechanism is not an exclusively limiting mechanism, but is linked to the output of the apparatus. The prisoner is also a guard and the very walls of the panoptic-mechanism. But what really makes Foucault's approach different is that for Foucault, a panoptic-mechanism, although similar in metaphoric architecture, has a dual role. Not only is Foucault's Panopticon a technology of power and discipline, but it is also an apparatus of production. In Foucault's model, instead of a focus on the body as a subject of technological limitations and boundaries, the body is also a mechanism for

the expression of individual embodiment. For Foucault, embodiment and our individual experiences of the 'real' are mediated through socially and politically imposed external norms. The shift from analyzing videogames as strictly disciplines on the body to the interaction between 'pattern' and 'presence' is the very definition of the movement from the 'human' to the posthuman. Where Bentham's approach involves an attempt to apply to New Media outdated canons of analysis, viewing videogames as panoptic-mechanism that impose limitations and provide psychological affordances presents a much more complicated reality of the communication medium.

Computer games offer the greatest range of customization for interaction. Most computer games can be played using the keyboard and or mouse, but devoted gamers can also buy steering wheel controllers for driving games, joysticks for flying games, and controllers for game emulators to make the gaming experience seem authentic. Within the scope of gaming controllers, are further affordances for individual customization. Controllers can be programmed to act in specific ways with specific games. To accommodate individual styles of game play as well as physical differences between gamers most controllers have buttons that can be reprogrammed. By reprogramming the controller axis buttons, a gamer playing *Spiderman (2002)* can control the movement and perspective of multiple events in multiple accesses. The Gamer can move the character while at the same time moving the distance, and direction, and position of the camera. Also, while some games are great to navigate using a controller, other games with similar gaming engines are can be more easily navigated (by some) using the keyboard and mouse. *Tomb Raider 3*, for example is too cumbersome to be played using a controller,

and is better experienced through a keyboard and mouse. The range of interaction methods available in videogames are a direct result from the tension between individuating the gamer in 'the body' and attempting to allow for the individual experience of interaction with the Gamer's embodiment.

The real power of Foucaultian analysis is that the machinery of discipline becomes more complicated. The mechanisms of control become avenues for discourse through the internalization of the discipline. Since the Foucaultian panoptic-mechanism turns the prisoner into his/her own guard, how the prisoner interpolates him/herself into the discourse of the discipline produces an identity position. A good general example is a crosswalk. The lines of the crosswalk are the panoptic walls defined by society. When a citizen crosses the street their chosen special relation to the crosswalk is both an example of internalization and discourse formation. A pedestrian choosing to cross outside the marked lines of a crosswalk becomes a subject of ideological discourse and identity production. A teenager, for example may use the panoptic-mechanism as an expression of defiance or individuality by purposely J-walking. The pedestrian crossing outside the panoptic walls maybe subject to a fine and is at an increased risk of personal injury. The relation of the individual to the law of the crosswalk is a mechanism of ideological production. The reaction of the individual to the political ideology that the crosswalk represents is a discourse of identity production.

In videogames, identity production or alternative subjective spaces are defined by a Gamer's interaction with the rules and ideologies of the apparatus. In first-person Shooters like *Quake II* the rules are not simply kill or be killed, as a Benthamite reading

would suggest. Gamers, especially in online Gaming, can choose how they play the game. Morris describes a situation in the multiplayer *Quake II* where Gamers developed a strategy called camping. Camping is "the practice of staying in one strategically advantageous area." Although Morris maintains that "because the rules enforced by the game software itself are so clearly defined, the player is ostensibly freed from making any moral choices in the game—anything that is possible is permissible." The practise of camping suggests otherwise; it is an example of ideological production because the individual strategy of camping has produced an ideology of morality within the Gamer discourse community. Morris explains that "If a player is camping, other players will begin to complain and abuse them, and sometimes join together to eliminate the camper and return some balance to the game" (Morris pp. 95-96). Gamers who enforce no-camping rules are both prisoners and guards within a panoptic system. They are citizens of the ideological state apparatus who internalize the rules of the State, but also contribute to the creation and enforcement of new rules that represent new ideologies.

Posthuman Interface

At the posthuman interface, an interface that I read as a Foucaultian panoptic-mechanism, users are individuated by their ideological relation to the disciplines regulated by the machine. The body is positioned as the cultural construct of generalized embodiment plotted as the mean on a population statistics graph where the grid is created by the panoptic mechanism of the system, and the individual coordinates are produced by the embodied response of individuals to the established mechanisms. Constantly working to improve our interaction with machines, designers individuate users into categories:

left-handed users, laptop users, office users, educational users, and so on; so the body is a universal political text, an imposed identity labeled as human—a rational legacy of Renaissance-rationalism: all individuated users are equal before the interface. The individuation of people into standardized characters trapped in virtual bodies is characteristic of even the most abstract videogames. The self is projected into a virtual body prosthetic. The situating of the self into an imposed body transgresses the hyphen between post and human back onto the human. This is where many critics of videogames fail in their analysis; they read videogames as disciplinary technologies of the 'human' rather than the post-human.

The videogame and all posthuman interfaces do not just impose panoptic disciplines on the Gamer, they also allow for a mechanical extension of the body and its senses. The videogame is a technology that allows an individual to occupy an alternative digital subjectivity across the seam of the interface. Each gamer is not just a passive audience member but an active participant in the medium. Just like any great literary or cinematic work, videogames inspire in us the opportunity to imagine; the opportunity of entering alternate subjectivities. Games allow players to enter multiple subjectivities and identities--not only by playing different characters but by playing the same character multiple times. Dying in *Space Invaders* means getting another 'life' another incarnation of the videogame self. Games such as *Hitman 2* that aim for greater verisimilitude in their diegetic worlds do not simply reincarnate the player where he/she died but instead return the player to the beginning of the level or to a designated checkpoint in the game's narrative. In early arcade games, time translated into potential profits and another

strategy for incarnation was to allow for multiple simultaneous selves rather than rewarding with more linear incarnations. Many flying games like *1942* would reward a player with a secondary self, a mini-plane that mimicked user movements and increased user firepower as a reward rather than adding extra 'lives.' The extra life or the secondary self is an example of posthuman ideology where the self becomes an integrated subject with a machine extension—an electric prosthetic.

Games like *Microsoft's Dungeon Seige (2002)* have expanded the idea of secondary selves to allow Gamers to switch between members of a group. As the game progresses, the Gamer either finds or buys party members to add to his/her questing group.[xxxi] A player can then choose from whose first person perspective the game is to be played. A player can toggle between a female or male, a human or an elf, a barbarian or a wizard, while the computer ensures that the other characters interact; the computer becomes the metaphor for other 'real' players. The very purpose of the game engine or the artificial intelligence of videogames is to create subjective spaces that Gamers can identify and label as Other. This results in two very important ideological nodes. First, the computer acquires an identity that is approximately in equal status to a 'human' player.[xxxii] The process of suturing that equalizes the status between the human and the machine is an ideological mechanism of the posthuman.

Secondly, the metaphor of the computer as an interactive character(s) also allows for the re-location of the Gamer's self into multiple distributed virtual selves. A Gamer can then toggle between identities or roles just like between active desktop windows without narrative interruption of the game play. The Gamer augmented by the machine is

a chorus multiple subjectivities. Game avatars allow the Gamer to become the panoptic eye in his/her own adventure. He/she is able to monitor a world through the eyes of multiple characters and adjust from the information gained the direction and strategy of the group thereby imposing his/her own discipline on the group, producing multiply distributed simultaneous localized identities. The computer becomes an extension of experience that empowers the user's if abilities beyond the real world with the five senses. Videogames are therefore metaphors for the articulation of self mediated by the seam between the player and the game-machine. They are experimental spaces, like virtual labs of pretend-reality where the mind is conditioned as a multiply distributed self that is both the subject and object of surveillance and discipline.

The ideological implications of constructing the self as multiple distributed selves have profound posthuman implications. Historically, identity has been defined as continuity.[xxxiii] Continuity is not in itself a measurable quality unless it is expressed in relation to a measurable form. Whether the body, a CD, or a building, defining the self based on continuity immediately forces the definition of comparison-boundaries between what constitutes the self and other. You cannot say that something has stopped without first identifying its liminal spaces. Continuity in a material sense is based on boundaries between categories. In videogames, the material continuity becomes superfluous to identity formation, because there are no material boundaries, only those rendered by the semiotic code of the game. Identity becomes rendered information patterns that are represented by a virtual body. The body becomes secondary to the information pattern

that codes its representation—because it is the information that codes for levels, number of incarnations, power, hair colour, and skill set.

Parsing the interface as a panoptic mechanism sheds light onto how the machine is transforming the human into the Posthuman. The interface *privileges information pattern over* embodiment. Discipline is enforced by mechanism of individuation. The keyboard, the joystick, and the mouse are mechanisms of translation—translating disciplined actions of the body into information states. As a system of IA the videogame interface is the point of interaction that streamlines embodiment into categorized information; information is given prominence over embodiment. The interface also treats consciousness as an epiphenomenon. The status of equality granted to avatars is equal to that of other players; the circumstance parallels the scenario of the Turning test. When a Gamer cannot tell the difference between an Avatar and the symbol for another player, consciousness becomes a by-product of interaction. The interface configures the player so that s/he is seamlessly articulated with intelligent machines. The interface is a IA of posthuman ideology.

The discourse at the interface is not unidirectional; constructions of the body are based on embodiment—the "Contextual, enmeshed within the specifics of place, time, physiology, and culture, which together compose enactment" (Hayles 196). An interface is bivalent; it provides the structure, the identity space, in which the user's individual embodiment becomes translated into a construct of the user's virtual body. At one extreme is the enclosed institution of panoptic interaction; the tangible locus of power; the boundary between the human and the machine: it governs interaction by enforcing

absolute boundaries. At the other extreme is the interface as an identity-mechanism: a discursive space of rhetoric where the human is augmented by the machine into the posthuman. The movement on the continuum between enforced boundaries of interaction to the posthuman interface as identity-space is the movement away from Benthamite materialism towards an understanding of the self as a negotiated space. Parsing the interface as an apparatus of posthuman ideology allows a more fruitful discussion of how videogames function as cultural artifices of society.

[xxxi] In Multi player online games usually members of a particular gaming party are played by other gamers. However, in the single player mode, these other players are controlled by avatars, until they are 'ensouled/embodied' by the player.

[xxxii] Emotionally speaking: as per Turkle's discussion of emotional investment of psychology to onscreen characters.

[xxxiii] Ray Kurzwell points out "our own particles are constantly changing" (Kurzwell 54). Our molecular material is constantly shifting like the material in the flame of a candle or the molecular contents of a stream. Talking about the Nile River at instance *X* on a timeline as compared to the Nile as instance *X+1 nanosecond* from a 'human' subjective worldview becomes a burdensome ordeal because our relative perception of time does not easily process nanosecond intervals of meaning. It is a human convention to telescope material change through time into a continuum of identity rather than to look at discrete material temporal units. We talk about candle flames, streams, and human beings as discrete entities despite their shifting molecular identities; we do this to provide a meaningful ontological concept of 'self.' The definition of identity must somehow address temporal cohesion or continuity.

Chapter 6: Screen Expressions

The first time I saw *The Matrix*, I was reminded of an essay I read by Putnam in a philosophy class. It was called "Brains in a vat." Putnam questions whether there is any way to know what is real by proposing a kind of thought experiment. Suppose a mad scientist took out your brain and connected it to an interface that so perfectly mimicked the signals your brain received from the senses in your body—they are after all *electro*-chemical—would you be able to know the difference between the perfect interaction between the machine connected to your brain (now housed in a vat of nutrients) from your body's interaction with the 'real' world? Putnam's answer is that a brain in a vat could not possibly conceive of itself as a brain in a vat because it would lack external reference for the signifier of what it means to be a brain in a vat. The process of questioning whether you are a brain in a vat is, according to Putnam, a self-refuting supposition. The problem with Putnam's argument is that he asserts that consciousness and self awareness are linked with external references. A brain in a vat, he says, could not conceive of itself because it would lack the referential basis for what constitutes a brain or vat—namely the signifiers of 'brain' and 'vat' are associated with internally constructed signifieds. He asserts that the signifieds for "brain" and "vat" are referential to 'real' objects or constructs. The assumption is that the proposition must be rejected because the brains in a vat could only refer to what the machine has shown them 'brains in a vat' are, so their concept is unavoidably different than the real world events. However, a child that learns sun from a flash card is also being 'feed' metaphoric

relationships that are not necessarily directly representative of their real world objects.[xxxiv]

The movie *The Matrix* demonstrates a case where the input from the human-computer interface is so well constructed that the mind is able to base all of its internal floating signifieds on what amounts to be electrical stimuli. In a world of simulation, the copperheads of *the Matrix* perceive reality based on information constructed for them by a machine. The electronic signals do allude to a 'real' historic world, but the simulation is so convincing that as one of the characters notes, if it tastes like real steak does it matter if it is not really steak?[xxxv]

If Katherine Hayles is correct and the posthuman future can become either a nightmare or a dream, then I would place The Matrix on the nightmare side. The construct of the matrix, the machines uniting the human subjects, privileges information pattern over embodiment and situations consciousness as an epiphenomenon of experience—real or simulated. The Oracle, the Architect, and Anderson are all programs in the Matrix conscious of their own existence; and rather than having equal status with humans, they have privileged status. Anderson can take over bodies and dodge bullets, the Architect knows the complexity of the matrix's design, and the Oracle is able to see the Truth. In *The Matrix* humans are seamlessly integrated into the machine. Most never know that they are bodies in a vat in a reality outside the construct of their everyday existence. They are prisoners in a Benthamite Panopticon—despite their proximity to the interface of the machine, they are defined by the boundaries imposed on to them.

In *The Matrix,* the boundary of control, the 'realism' of the construct, is necessary to perpetuate the system. Mechanisms of control in *The Matrix* are no longer the material mechanical aspects of the interface that joysticks and controllers represent today; they have become sentient programs within the system, agents of identity, agents of imposed interaction. Anderson and the other Agents are the panoptic mechanism of power; power in the form of information patterns that can use virtual bodies as prosthetics, but whose intervention is ultimately imposed on real bodies in the real world. When Agents impose identity restrictions on the virtual self, like erasing Neo's mouth—his primary tool of self expression and interaction—the ultimate goal is to control the state of the body in the real world. Bodies that are not confined to their panoptic roles within the Matrix are useless to the machine and are flushed to their presumed physical and informational death. Bystanders that are taken over by Agents are often killed in the process and presumably die in the real world, because the fundamental truth of the matrix is that it is a system of imprisoning the body.

The humans imprisoned in the matrix are Benthamite humans like those described by Provenzo: they do not question or test their boundaries; they simply obey them. But not everyone is imprisoned by The Matrix. Those who learn to read the code of the Matrix are transformed from Benthamite humans into Foucaultian posthumans. Neo, Trinity, and Morpheus are humans consciously augmented by the machine. They are able to suture with the Matrix and displace their subjectivity into the machine. They are the ultimate gamers, able to bend the rules of their virtual environment. They represent the 'Other' of The Matrix, the posthumans who defy the ideologies of the machine.

Subjective Spaces

In videogames, the 'other' is most often categorized in on of the following ways: friend—someone who is on your side, like a member of your questing party in NWN; foe—characters who try to impede you from achieving your goal(s), like the Space Invaders that are trying to invade; information device—the type of character who advances game play through information/power, like the narrator in *Spiderman* (2002). These categories were especially delineated in early videogames, but have become far more complex foils of the self. In *Spacewar!*, for example, much like in Kandinski's painting, the rhetoric of the visual propaganda is reduced to two basic shapes: the triangle and the rectangle. Where in Kandinski's representational schema a red triangle or a white circle represent global ideologies like communism and capitalism, in early videogames the addition of one vector, one line, or a change in colour, was enough to change the self to other and back again. The simplified visual metaphor of a line distinguishing 'self' from 'other' forms the most essential and direct association mirror for the construction and delineation of the self. In games like *Doom*, the not-'self' is usually represented as ugly, alien, and threatening. This juxtaposition of 'other' situates the self as the central character (each gamer is a 'protagonist'). And the psychological affordance that the visual rhetoric provides typically associates the protagonist with both the organic and mechanical. Represented quite often in first person shoot-'em-up's as the competition of disembodied hand and a mechanical weapon/tool—the on screen projection mirrors the off screen reality of the computer-gamer interface. The 'hand' in *Halo* (2002), *Serious Sam*, *Dark Forces* and various other first person shoot-'em-ups

juxtapose the 'other' to the 'self' while reinforcing the power of the interface identity between the gamer and the keyboard, monitor, mouse, and or joystick. Videogames can be read as ideological cultural artifacts that teach identification between self and other. Coded into games are symbols of imaginary Others that reinforce constructs of otherness in other media forms to become tools of political rhetoric. Aliens in *Doom* occupy the discursive space of Other. The Other is positioned as a target or obstacle for the Self, the symbolic ellipse provides an IA tool for the State in the real world. The State can then construct any opposition as Other, to access the cultural tool reinforced by the apparatus of videogames (among other forms of media).

The process of mirroring the self in the other or attributing to the 'other' traits that allow for meaningful comparison and contrast allows videogames to increase the Gamer's emotional involvement in the on-screen world. Shooting at vectors or raster constructs without a narrative subtext of identity does not carry the same emotional impact as aliens and monsters with which a Gamer can somehow associate. If, as Woodard maintains, identity is based on difference, then videogames, by mirroring characteristics of the self in the 'other' also facilitate the construction of the mask for the self. When a player begins a new game of *The Incredible Hulk* (2003), the Gamer wears the digital mask of the Green Monster. The surrounding military facilitate the Gamer's illusion and embodiment fantasy of the Hulk digital mask by reacting to the Gamer's on-screen representation according to the rules of the game and the Gamer's invested expectation, as if it were the Incredible Hulk.

The mirroring of the off-screen self in both the 'other' and the on-screen representation of self allow for machine to gradually allow the exploration of different digital masks. Each digital mask is a badge of citizenship in a specific context. Intrinsic to the posthuman are ideologies surrounding multiple digital identities. An information-based society asks its citizens to play multiple digital roles. We are increasingly being defined by digital identities, our Social Insurance Numbers, Credit Ratings, E-mail address. For some, this process is impersonal and dehumanizing, but for those able to transfigure the confines of digital life into opportunities to extend themselves into new discourse spaces, these digital identities hold much yet unrealized potential. The key to unlocking some of that potential may come through the multiply distributed digital roles Gamers play in Videogmaes.

Role-playing: Donning the Mask

Starting a role-playing game usually means you first have to name and define your character. In a videogame like *NeverWinter Nights (*NWN), although limited to a finite number of preset choices/options/disciplines, a player can choose between hair colours, body types, races, outfits, tattoo types, and genders. In NWN, a woman can play a male, a human can play an elf or dwarf, and an academic can even play a warrior. The videogame, more than any other forms of visually dominant entertainment text medium (i.e. cinema, television, magazines, and so on), requires user input. Possibly with the exception of the cult films,[xxxvi] an audience member at a movie, though not completely a passive vessel into which flows content, the videogame is by for the most interactive narrative.

Citing that hypertext allowed the audience to participate in the narrative, in the early 90's Landow had billed it as the voice of postmodern literature. Landow maintained that hypertext is postmodern in that it allows for multiple readings through non-linear texts. Although, as Aaresth notes, many of Landow's interpretations were a bit generous when it came to aggrandizing the merits of hypertext, he may not have been that far off when it comes to the potential of videogames, especially when it comes to the discussion of reader/player as part author. Like in a text-based MUD in which the player writes his or her character, videogames allow gamers to construct their character (their on-screen identity) through interactive input from the Gamer. What videogames offer to produce as panoptic interfaces is a new kind of gamer identity defined by the integration of human and machine narrative where the human and the machine share collaborative responsibility for authoring the individual reading of a virtual text. The Sims (2000) presents an interesting case of identity formation. On the one hand the game situates the player as a panoptic omniscient viewer, while on the other hand the player is an active writer in the unfolding narrative.

The Sims (2000)[xxxvii], the most popular PC game ever, is a kind of virtual dollhouse. Players create and interact with simulated individuals and families to create narratives of virtual lives. A brief tutorial teaches players how to navigate the interface and defines the premise of the game: to keep Sims happy. For a Sim, happiness is the sum of specific needs (hygiene, room, bladder, fun, etc.); the player makes choices for his or her Sims as they 'live' their lives. How the player interacts with his or her Sims is both an exercise of identity projection and a vehicle for personal exploration and growth.

Identity projecting is the process of displaying identity through authorship and narrative. In the Sims, the gamer is a kind of author for the stories of the 'lives' of their Sims. Some players have gone so far as to use the album feature of the game to tell specific narrative stories. Although not originally intended as a way to use the game, the narrative feature of *The Sims* is being expanded to include not only the potential for 'graphic' novel type visual essays, but will also be expanded to include video. Game designers call this "emergence," when programs are used in ways that they were not originally intended. In the next version of the Sims, designers plan to expand the album feature and Gamers will soon be able to use *The Sims* as characters in virtual home videos.

The example of The Sims demonstrates the potential that posthumans have within Foucaultian Game interfaces. Gamers are able to expand the repertoire of their experience beyond the prime directives of the environments encoded by an IA. The process is an example of Hayles' posthuman dream that "embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality" (5). The Sims demonstrates one promise of cathartic exploration that information technologies represent.

Gender Blender

One of the most prominent masks in role-playing games discussed in academia is gender. Greg Costikyan, a prominent game designer writes that "The computer gaming industry is a monoculture: It consists almost entirely of white suburban males in their 20's" (Costikyan 51). The inclusion of female characters in early games and MUD's

would then suggest a tendency of some male players to try on different gender masks. Sherry Turkle points out that on MUD's, whether to be left alone or as an identity experiment, female players are also playing male characters; and likewise the creed of Internet chartrooms is that you never know the gender of the person with whom you are talking. As a monolith, the videogame industry, as the entire computing industry, is changing. As a medium, videogames are becoming a virtual playground for gender blending.

The transition has already started. One caller to a late night talk show I hosted, when asked how she knew her fiancé was the 'One', answered stereotypically, "We have a lot of interests in common." When pressed for more details, the 18-year-old female caller simply stated that "We like to play videogames together." Games like MUD's and the Sims that enjoy a high ratio of female participants are in part an answer to the lobby for more 'female' oriented game content.[xxxviii] Even games generally considered to be male oriented are becoming more diverse in their appeal. During a HuCo 616 class exploration of NWN, many students were surprised to learn that the player of the month at the time was not only female, but a single mother in her fifties with a doctorate in psychology.

One of the primary aspects of role-playing in videogames is that the medium allows players to switch between differently gendered subjectivities. Although the mask is one that privileges information rendering over actual embodied experiences, videogames allow for gender bending by responding differently to different characters. Much like a Barbarian character will prompt different game play from a sorcerer, a

female character can illicit different interactions within games like NWN than a male character.

Videogames fall into the category of Haraway's cyborg. They are the point at which the organism meets the machine; the point at which liminal boundaries become expressions of intangible marginal identities. The Gamer, like the cyborg, is not quite human nor is s/he entirely a machine. The Gamer is not bound by organic sexual categorizations or socially constructed gender roles. In the game there is a transfiguration into a new emergent identity. But the new identity is not a throwback to some ideal human self. There is no Eden at the boundary between the human and the machine; no classic definitions of absolute self and other. Videogames allow for the coding of the self between the boundaries of gender, sex, and other political categorizations. In the game, the Gamer is Haraway's writer, and the game is the pen that allows that writer to seize the tools that construct other and engulf them into a new emergent persona. What give games the power to disrupt the status quo is the power of interaction. Videogames as a cyborg technology do position the user as a subject in a localized rhetorical space, but within that rhetorical space the Gamer becomes the poet, the creator, the artist who is able to take a tool and change its purpose to express a new perspective. Between the human and the videogame there is a boundary of symbiosis that allows for the posthuman interface. An interface that allows for new modes of expression that will and does challenged established uses.

Machinima and Convergence

According to an article in *Wired News*, a new trend in movies is blurring the lines between mediums. Machinima or Machine Cinema is causing video card manufacturers, videogame developers, and would-be directors alike to jump on the bandwagon. The film genre involves making films on videogame sets. Not sets that are designed to simulate videogames, but the actual 3-D videogame world engines used as backdrops for would-be movie moguls. Not only is Maxis a division of Electronic Arts, maker of *The Sims*, planning to include tool sets for video authorship, but games like *Unreal*, and *NeverWinterNights* are coming out with tool-sets that allow Gamers to construct their own environments. Machinima offers movie makers real-time rendering for a fraction of the cost of movies like *Shrek* or *Finding Nemo*. In Machinima, the videogame engine becomes the backdrop for both an interactive 'game' narrative, and a potential possible world for traditional narratives (with all the spectrum of storytelling between the two). Instead of gamers being able just to play *Enter the Matrix* (2003), watch the movies or the *Animatrix* short stories, gamer-authors will be able to use the 'matrix' aesthetic, the Matrix virtual world, to construct their own stories. The rapidly developing hardware and software in the videogame industry, promising an era of photo-realistic environments, is going to blur the line between cinema and games; players, audience, and gamers. Games will soon become backdrops for movies and audiences may soon become passive players in environments created by Gamer-directors.

The emergence of new ways to use videogames, whether through using aspects of the game for personal expression or as backgrounds to greater narrative efforts, is indicative of a greater social tendency towards machine mediation of our realities. When

our world becomes mediated through a mechanic interface, we become information systems, and we begin to define our world by the reference provided by a machine and not the real world. We become posthuman when we see a series of buildings referring to a category of semiotic signifieds derived from video gaming experiences. When a child asks "Where is Spiderman?" because his experience of reality is already being mediated by a virtually constructed iconography, his relation to the 'real' world, his projected identity has become posthuman.

Although role-playing and the multiply distributed self are often cited as the main examples of computer-aided identity projection, few game critics have yet explored the extension of the body that games represent. The body as the material matrix of identity helps us process information about the outside 'real' world. Our physical self is responsible for the individuality of embodiment. The idiosyncrasies of our individual senses make us human and unique. By picking up a controller, the physical status of identity changes in two distinct ways. First, the senses of the body are extended by the machine body. The monitor, the motherboard, and the speed of your CPU become physical conduits of simulated sensory input. The controller becomes part of the Gamer's body identity, the medium on which Foucault's soul operates. According to Foucault the soul is

> The element in which are articulated the effects of a certain type of power and the reference of a certain type of knowledge, the machinery by which the power relations give rise to a possible corpus of knowledge, and knowledge extends and reinforces the effects of this power…. The soul is

> the effect and instrument of a political anatomy; the soul is the prison of the body. (pp. 29-30)

Parsing the posthuman interface as an opportunity of alternate subjectivities, the ideologies and power relations encoded there come a part of the Gamer's soul, and the machine an extension of an augmented self.

Although in videogames, the machine is not literally interjected into the body like in the case of the Borg or the Matrix, the machine becomes an extension of the body by providing the body proper with sensory stimuli. Hayles observes that viewing the human computer interface as an information exchange system allows the interaction of information exchange to redefine the human into a new physical whole which extends to the communication technology that forms the material matrix of the dialogue. Thus the posthuman body, if considered a conduit of information transfer from one mind to another, or within the same mind, subsumes both the human and the machine. More acutely than perhaps a passive technology like glasses, the videogame comes closest to Donna Haraway's cyborg ideal—where identity moves beyond the unitary centre of a body into a more peripheral model of biomechanics. Videogames are a kind of virtual cyborg, an alternate subject of Haraway's Cyborg. Men become women, women become men, the elderly can be young again, and the weak can be powerful. Videogames push the boundaries of identity outside of traditional spheres of hegemony into the gray areas of definitions. In videogames, constructed gender roles can be extended with impunity, the process is not unlike William Gibson's description of jacking into someone else's body in *Neuromancer*[xxxix]. Videogames represent a kind of remote materiality, the

projection of the physical self through the machine. And videogames are the training ground for future remote materiality that interfaces are already producing. Doctors who train in simulators are also beginning to perform surgery around the world in virtual environments. Videogames are the virtual representation of what will soon be a reality. The interaction in videogames aims to makes the suture between the player and the game is invisible. The remaining scar on the emergent self, the Gamer is a foreshadowing of a trend that will fundamentally change our concept of our physical boundaries.

Secondly, the simulated sensory input from the machine is modeled on archetypal human senses—eyes to watch the screen, hands to feel the force feedback—but the information is not itself referent to material embodied objects, but digital representation of semiotic ideas. The computer itself can thus be considered a kind of new sense that interprets particular stimuli, in this case binary, into meaningful symbols. Without functional eyes we cannot interpret light waves (even though we can still sense them through touch for example), and with eyes, we are limited to particular kinds of light waves that we can interpret—the visual spectrum in general and individual embodied experiences that result from conditions like colour-blindness. Likewise, the computer as a sensory apparatus allows us to see a particular representation of code within the range of its performative spectrum. Since our senses are very much like panoptic mechanisms that are both limiting and empowering, the computer can be viewed as posthuman information sense--an evolutionary step towards our transfiguration into the posthuman.

Videogames cannot be played without a machine. Choosing to play a videogame means adopting the boundaries of the interface of that game. The tool defines the

parameters of its application. How many lives, how many monsters, how many bullets and how they behave, are all products of the machine's code-crunching abilities. But within the oppression caused by rules, within this machine space, are landscapes of affordances for future artists, Gamers, programmers, and office workers. This is the fertile land of tomorrow's reality; a reality in which the machine allows for the extension of the human identity and where the rules of the game world allow individual ideologies to emerge. The point at which users in *The Sims* began to use the software outside of its originally intended uses, was one of the first steps towards the point at which we *Enter the Matrix (2003).*

The game is a communication medium and a cultural artifact. But applying strictly literary theories to its analysis is limiting the potential of the medium to Bentham's panoptic architecture. It is clear that videogames are panoptic constructs; even the critics agree that videogames are teaching machines, but the question is, what do they teach? What are videogames teaching us about our posthuman future? Are we simply puppets to machinery disguised as entertainment? Have we been duped to accept technology that offers us no individual benefits other than a docile existence in a rendered reality? Or is it possible that the master-slave relationship is an over-simplification of our interaction with videogames? A reading of games in the context of Posthuman panoptic mechanisms suggests that videogames provide a communication channel that is not unidirectional, that games are also opportunities for individual expression and growth. The existence of modes of expression in videogames outside the scope of originally conceived interactions would suggest that videogames are the ideal metaphor of a

panoptic apparatus of discipline *and* production, and necessitates more thorough academic attention. More is at stake here than initially meets the eye, and a panoptic treatment of games is an investment in understanding the emergence of a post-human Human-Machine identity.

One of the immediate benefits of understanding videogames as panoptic mechanisms is that it provides a method and system of analysis. *Star Trek: Armada 2* is basically a more complicated version of *Starcraft* set in the Star Trek universe. The two games rely on similar game play and panoptic disciplines, but *Starcraft* is a far more effective and less cumbersome a game because it 'trains' the user in cyclic-self reinforcing tutorials that are worked into the narrative of the game. As you advance levels in *Starcraft*, you are 'taught' cumulative skills by the game itself. Basic skills become disciplined human-computer interactions as more advanced skills are taught. This is a kind of panoptic-cycle of training-observation-production-and-reward imposed on the Gamer. In *Star Trek: Armada 2*, the tutorial is linear. A player is shown in succession a series of 'skills' necessary to build an economy, and then an Armada. The linear system of training is somewhat intuitive for someone familiar with this genre of game.[xi] The downside to this quick and dirty tutorial style is that the linear approach fails to repeat or highlight the special tactics and features that make the game distinct. It fails to train the player in a manner that reinforces new skills and fails to check whether those skills have been learned. The end result is that many of the 'special' moves are left to be either forgotten or must be painfully re-learned during the actual game. This training approach is less effective than the one used by *Starcraft* because it does not

immediately engage the player in the narrative, so there is no hook to make the discipline productive and entertaining. *Armada 2* is less engaging because it fails to make the discipline of the tutorial weightless and self-internalizing.

A panoptic reading of videogames allows a comparison of the effectiveness of a videogame's interface: an interface that includes a narrative among its component parts. How well have the designers hidden the disciplines of a particular game within the 'entertainment' or the interface of the game? A game that more effectively interfaces with a user, to allow the user to become 'productive' within the game's mechanisms can be said to be more effective than another comparable game. The measure of what makes an effective interface, a developing field in computer science, must be able to effectively situate the user as both subject of panoptic disciplines and as panoptic producer. Effective interaction allows for influence both ways.

The measure of interface performance in videogames has clear applications in the mainstream world. Currently a spin-off company of Bioware called CodeBaby is working towards constructing a general aide avatar that companies can use to process technical information. It makes perfect sense that a game company would be taking the lead in creating the next level of visual human computer interaction; games after all, have been an integral part of computing practices from mainframe space wars to the incorporation of videogames on early PCs.[xli] And videogames have been working for years on how to interface large quantities of database information with a human subject. So any system of analysis that helps make videogames a more enjoyable experience will eventually be adapted into main stream HCI. Videogame companies of today are a kind

of Research and Development lab for the interactions of the future of HCI. The Human Factors for HCI research are an important consideration of any good game design and allow humanists the affordance of studying microcosms of human identity production.

[xxxiv] Remember the 4 year-old? His signified for 'city' was based on a virtual concept of a city rendered by a machine.

[xxxv] Perhaps Putnum and Descartes are asking the wrong question? Perhaps it does not matter whether a malicious demon or a computer are controlling our realities; perhaps the real question is how do we establish our citizenships within the limitations of our realities.

[xxxvi] Like the Rocky Horror Picture Show, where members of the audience dress up and participate in the narrative by throwing toast and rice and by performing other rituals.

[xxxvii] The Sims will be used here as the umbrella name for the game and its various expansion-sets including Sims Vacation, Sims Hot Date, Sims House Party, Sims Online, ect.

[xxxviii] Find article on lobby group for female game content--I think it was in Advertising Age.

[xxxix] Even if that body is only virtual at the moment.

[xl] Belonging to the Strategy Role-playing games like *Dune, Dune 2000, Civilization, Rise of Nations*, etc.

[xli] As mentioned earlier, videogames were the very first 'computers' to be welcomed into the home in the 1970's and 1980's and video arcades where the very first exposure many people had to 'analytic engines' like the Atari VCS (Video Computing System).

Conclusion

> Compared to all other literary formats, including hypertext novels, the adventure game's textual structure is an alien, too far removed from the genus of hegemonic literature to be recognized by any but a few xenophiles, who risk professional suspicion or ridicule when they dare suggest the pertinence of their newfound, strange looking object. (Aarseth 109)

In the movie *The Last Starfighter*—the first movie to employ CGI animation—the videogame plays a small but pivotal role. In a trailer court out in middle America, a single arcade cabinet stands between a boy and his future, between the present human state and the technologically advanced 'reality' of the cosmos. The game is not a meaningless waste of time, but a crucible for a champion on a universal scale. The game is a simplified test of potential performance in the 'real world;' it allows for a human to become a Starfighter, and breaking the record is not just a solitary meaningless event but one that is celebrated by the entire community. A videogame is the fortuneteller of one boy's future and a legacy for the entire human race.

Although most contemporary home videogames have better graphics than those rendered by the Cray supercomputer in 1984, *The Last Starfighter* marks a milestone for New Media, and although some consider the milestone to be the CGI graphics, I would suggest that another milestone was the shifting status of the videogame as a cultural artifact. Rather than being relegated as the subject of political policy and parental discipline, the movie raises the status of the videogame to the state of artifact. As a

cultural artifact the videogame becomes a tool through which we tell our tales, and project identities. Unlike in the movie *Tron* (1982), in which the human is brought into the digital world and forced to participate in the game world of the machine, in the *Last Starfighter*, the game is the crucible to bring the machine world into the reality of the player. More than just a stand-alone arcade game, *Starfighter* (a game that was promised but never produced by Atari), was an interface for greater universal insights and truths that were not overtly apparent to humanity. Only through the crucible of a videogame was a 'human' able to access a greater reality. Videogames are models of a more complex social order; they are the keys to producing greater truths.

Future

As the Internet grows, and other networks being to individuate themselves in a sea of information, the future seems likely to be based on layers of multiple networks.[xlii] When citizenship in one network, like the semantic web, becomes interlaced with other networks and intranets, survival will hinge on the ability to think of the self as a sum of multiple identities.[xliii] These digital identities, based on the personas we project in a particular environment and rendered by the rules of that environment and their interaction with particular individuals, will become the basis for the shift towards posthumanism. The process has already started. Every time the Gamer takes up a controller, every time mouse clicks 'send', a dialogue occurs between the human and the machine: rules are set, and worlds are created, disciplines are internalized, and new embodied experiences are generated. The language at the seam of this interaction is a posthuman dialogue that is being improved daily. On a technological front, much of the work is being done in

university labs, military test centres, and companies with the big research and development budgets. These are the people who are bringing new technological forms of interaction. From computer systems that respond to eye movements to simulators that respond to a pilot's thoughts, technology is being developed that aims to seamlessly integrate humans with machines. Brought on the human front, videogames are teaching our minds to interact with machines. As consumers, gamers have driven many of our technological advances in the past three decades. The same video card technology that allows for NetMeetings was largely developed to support game play. As a culture, we are willing to turn to machines for entertainment and that has encouraged manufacturers to improve the quality of that entertainment—as they scramble to compete in the $10 billion videogame industry. In the foreseeable future, the quality of entertainment provided by the interaction between the human and the machine will continue to improve until we as a society, and possibly a species, work to play. We may be developing a society where, for the privileged classes, playing involves a seamless interaction with what is a constructed world: a fantasy role-playing game, and immersive videogame.

Videogames may be a preview of the way we experience the world and learn about our environment, history, and even other people. Videogames may not have accomplished all this yet, but one day a 'gamer' will be able to interact with a simulation of an old pirate ship to learn how to sail it, or watch the battle of Waterloo as s/he plays Napoleon, or talk to a virtual self of a person from Mars. The interactive optic interface, whether projected directly through the optic nerve or relayed through a series of graphic displays, will one day be an intrinsic part of how we experience the world. Since our

experience of the world impacts on our constructions of metaphors about the world, interactive video 'games' of today are already contributing to the evolution of the posthuman citizen. Already through the incorporation of disciplines presented to gamers in videogames, we can start to see the integration of panoptic disciplines into the human. When videogames evolve to the stage at which they are indistinguishable from reality, and the majority of our experience becomes mediated by machine interfaces, can we still call ourselves human?

The Posthuman Baby

Since my first conversation with the posthuman 4-year-old, I have been listening attentively to his dialogue hoping for a conclusion—hoping that he would say something that I could use to show how videogames will make his relationship to his world different than the generations before him. And just when I had lost all hope, it happened—just like that, a dialogue that was too perfect to be made up.

After daycare one day, he was sitting in the back seat making faces at me, when he suddenly said, "I'm going to be a robot when I grow up, and I'll beat you up." He made a grumpy face for emphasis.

"Then you can't play Spiderman when you get home." I replied steering him towards videogame conversation.

"Yes I will."

"No you won't."

"When I'm a robot I'll play Spiderman, and I'll play the Hulk too," he threatened.

"How can you play Spiderman and the Hulk at the same time?" I asked.

"The robot Andrew will play Spiderman, and I will play Hulk."

A four-year-old child, a Gamer, was providing me with the answer. He saw no contradiction in articulating himself as a machine or the existence of multiply distributed subjectivities. Without knowing what posthuman ideology is, without understanding the implications of his words, the four-year-old was able to articulate one of the principle views of Hayles' posthumanism. How did he internalize the ideology? Probably from one or more of the Ideological State Apparatuses to which he has been exposed. It could have been a television program or film, a commercial or banner ad, but most probably it was also through the videogames he has grown up playing. From an age before he can read, a child of the information age will be exposed to the ideologies embedded in the State Apparatus of videogames. That child will grow up experiencing the world mediated by augmented subjectivities of gaming realities.

> Some are tempted to think of life in cyberspace as insignificant, as escape or meaningless diversion. It is not. Our experiences there are serious play. We belittle them at our risk. (Turkle 269)

Machines change the human experience: they enrich the real. The emergent selves from human machine interaction are hybrids of identity. In the beginning of the human experience, when the machine was just a simple tool, these hybrids-identities ('tool-maker' and the like) deserved nothing more than footnotes from psychoanalysis. But the information revolution and the computer have begun to change the power dynamic; the involvement of the tool in the human-machine identity has begun to play a more prominent role. Everyday our interactions with machines become more varied,

more complex, and more intertwined. And the interface becomes less and less prominent and inhibitive. As that interface becomes less visible, the identity of human in the symbiosis becomes less and less recognizable by current definitions. Videogames present scholars with a kind possible virtual future, a future that allows academics to peer at the forefront of the interface: between the human as we remember it and the images of the posthuman that we are constructing. Videogames are future images being broadcast into the present that can help us understand our future selves.

What then is at stake? Why spend time understanding the effects of games on the body of the Gamer? Why should the affordances presented by machines matter? What is the bottom-line? A four-year-old child. A four-year-old child, whose semiotic signs have been disciplined through human-computer interaction, who superimposes virtual concepts onto reality to enrich his understanding of the world, and who can interact with a machine before he is actually able to read. That is the bottom-line. That is what is at stake. The future. Our posthuman future.

[xiv] Rumor has it that a 'university' network is in the works that will allow for the exchange of research and information without tying up the bandwidth of the current infrastructure. If this trend continues the future may see information superhighways or metanets that support specialized information traffic—a kind of multiple distributed network of information.

[xv] Even today I have multiple identities: my university computing network services identity, jferenbo; my e-mail identity, chipschocolates@hotmail.com; and many others.

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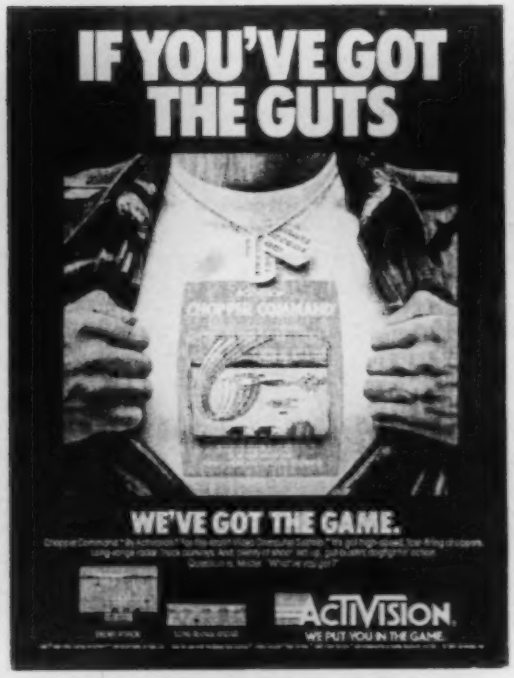
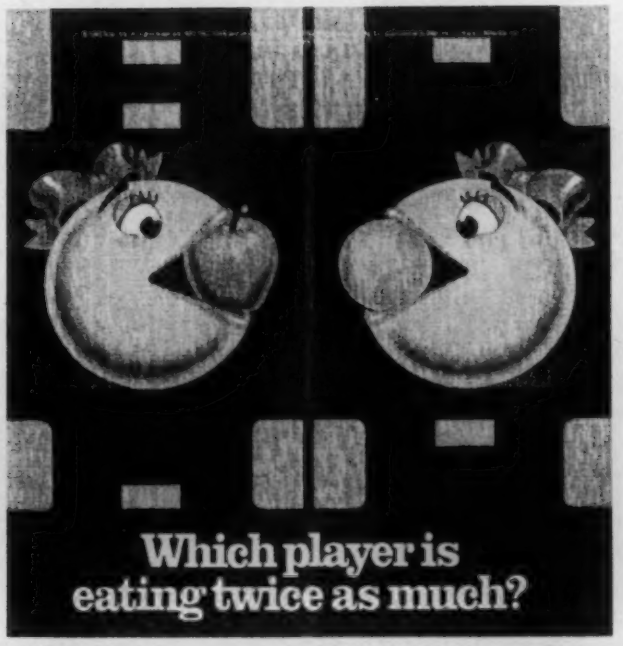
Appendix I


IF YOU'VE GOT
THE GUTS
WE'VE GOT THE GAME.
ACTIVISION.
WE PUT YOU IN THE GAME.

Appendix II



Think fast. Here comes MS. PAC-MAN from Atari.

ATARI